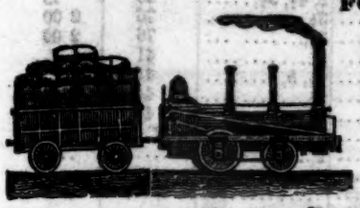
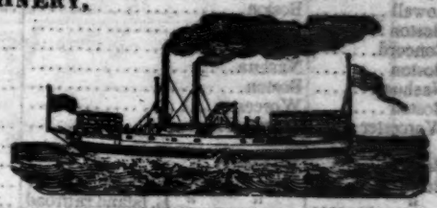
AMERICAN RAILROAD JOURNAL,

AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY, AND MINES.





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THE AMERICAN RAILROAD JOURNAL is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

RATES OF ADVERTISING.

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One square "	15 00
One page per month	20 00
One column "	8 00
One square "	2 50
One page, single insertion	8 00
One columnn " "	3 00
One square " "	1 00
Professional notices per annum	5 00

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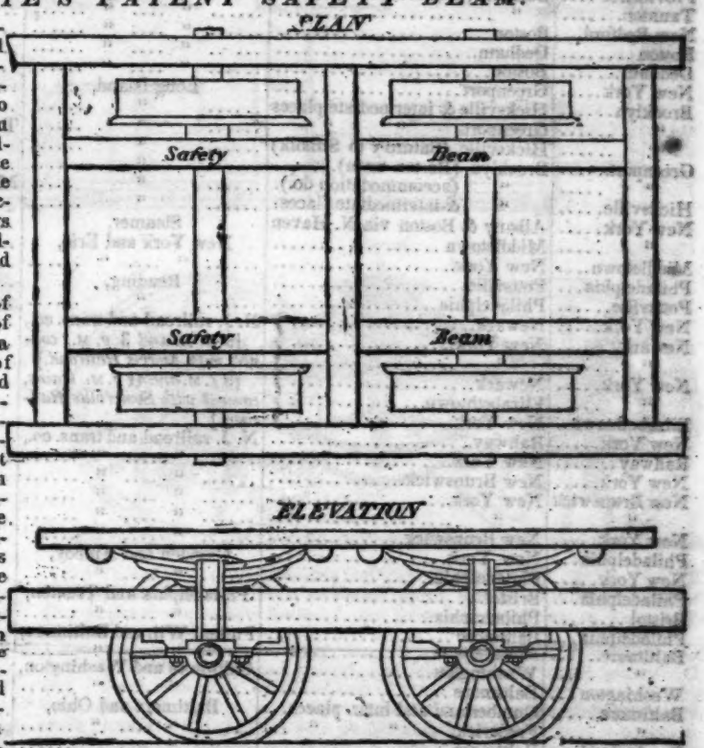
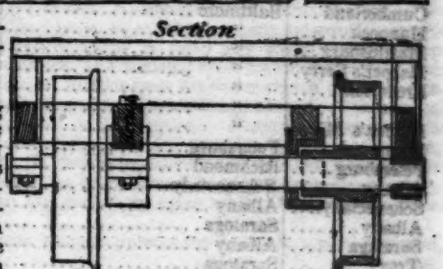
W. R. CASEY, CIVIL ENGINEER, NO. 23 Chambers street, New York, will make surveys estimates of cost and reports for railways, canals, roads, docks, wharves, dams and bridges of every description, with plans and specifications. He will also act as agent for the sale or purchase of machinery, and of patent rights for improvements relating to public works.

KITE'S PATENT SAFETY BEAM.





MESSRS. EDITORS.—As your Journal is devoted to the benefit of the public in general I feel desirous to communicate to you for publication the following circumstance of no inconsiderable importance, which occurred some few days since on the Philadelphia, Wilmington and Baltimore railroad.

On the passage of the evening train of cars from Philadelphia to this city, an axle of our large 8 wheeled passenger car was broken, but from the particular plan of the construction, the accident was entirely unknown to any of the passengers, or, in fact, to the conductor himself, until the train, (as was supposed from some circumstances attending the case,) had passed several miles in advance of the place where the accident occurred, whereas had the car been constructed on the common plan the same kind of accident would unavoidably have much injured it, perhaps thrown the whole train off the track, and seriously injured, if not killed many of the passengers.

Wilmington, Del., Sept. 28, 1840.

☞ The undersigned takes pleasure in attesting o the value of Mr. Joseph S. Kite's invention of the Safety Beam Axle and Hub for railroad cars. They have for some time been applied to passenger cars on this road, and experience has tested that they fully accomplish the object intended. Several instances of the fracture of axles have occurred, and in such the cars have uniformly run the whole distance with entire safety. Had not this invention been used, serious accidents must have occurred.

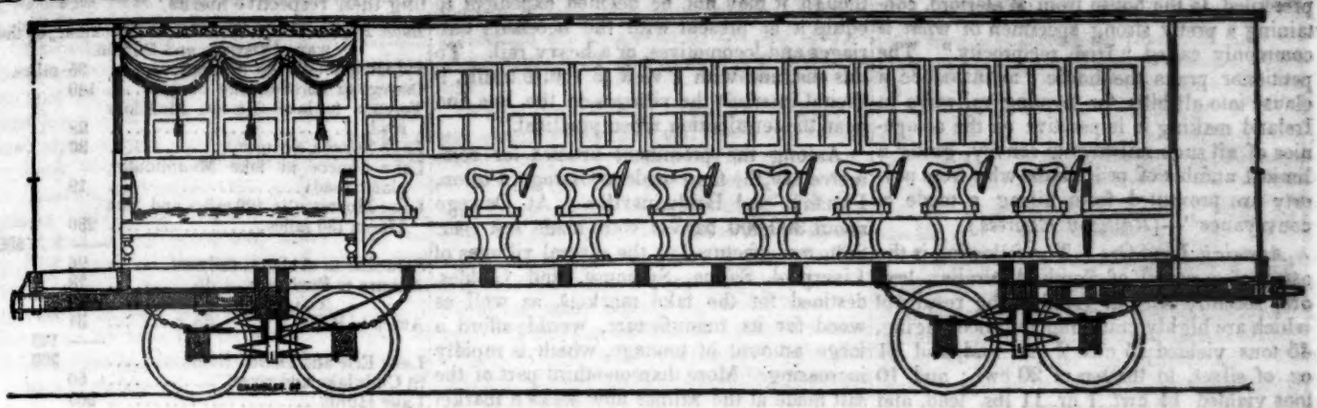
In short, we consider Mr. Kite's invention as completely successful in securing the safety of property and lives in railroad travelling, and should be used on all railroads in the country.

JOHN FRAZER, Agent, JAMES ELLIOTT, Sup. Motive Power,
GEORGE CRAIG, Superintendant, W. L. ASHMEAD, Agent.

☞ A model of the above improvement is to be seen at the New Jersey railroad and transportation office, No. 1 Hanover st., N. York. js15

TRAINS LEAVE	FOR	BY RAILROAD	DAYS.	A. M.	P. M.	MILES.	FARE
Boston	Portland	Eastern,	Daily,	7½,	2½,	106	$3 00
"	Portsmouth	"	"	7½,	2½, 4½,	54	2 00
"	Newburyport	"	"	7½,	2½, 4½,	35	1 25
"	Salem	"	"	7½, 9, 11½,	2½, 3½, 4½, 6,	14	50
"	Portland	Boston and Maine,	"	7½,	2½,	109	3 00
Portland	Boston	" "	"	7½,	3,	109	3 00
Boston	Lowell	Boston and Lowell,	"	7, 11,	2, 5,	26	75
Lowell	Boston	" "	"	7½, 11,	2, 4½, 5½,	26	75
Boston	Concord	Concord,	"		3½,	76	2 00
Concord	Boston	"	"		3½,	76	2 00
Boston	Nashua	Nashua and Lowell,	"	7, 11,	5,	41	.....
Nashua	Boston	" "	"	6½,	1½, 5,	41	.....
Boston	Worcester	Boston and Worcester,	"	7, 9,	2½,	44	1 25
Worcester	Boston	" "	"	7, 10,	6,	44	1 25
"	"	" "	Sundays,	7,	.....	.....	.....
Boston	Worcester	" "	"		2,	.....	.....
Boston	New York via Norwich	" "	Mon., Wed. & Fri.,		4,	.....	.....
"	" " L. Island railroad	" "	Tues., Thur. & Sat.,	7,	.....	.....	.....
"	" " New Haven	" "	Daily,	9,	2½,	.....	.....
"	Albany	Western,	"	9,	2½,	200	6 00
Albany	Boston	"	"	8½,	1½,	200	6 00
Springfield	Boston and Albany	"	"	7,	3,	.....	.....
Boston	New York via New Haven	"	"		2½,	.....	.....
Charlestown	West Acton	Fitchburg,	"	8,	1, 4½,	.....	.....
West Acton	Charlestown	"	"	7½, 10½,	5,	.....	.....
Boston	New York, via Steamboat trains	Boston and Stonington,	Tues., Thur. & Sat.,		4½,	.....	.....
"	" " "	Boston and Newport,	Mon., Wed. & Fri.,		4½,	.....	.....
"	Providence	" "	Daily,	7½,	4,	41	1 50
Providence	Boston	" "	"	On arrival of the	mail.	41	1 50
Taunton	"	" "	"	8,	4,	.....	.....
New Bedford	Boston	" "	"	7½,	2½,	.....	.....
Boston	Dedham	" "	"	8½,	3, 6½,	.....	.....
Dedham	Boston	" "	"	7, 10,	5½,	.....	.....
New York	Greenport	Long Island,	"	7½,		95	2 25
Brooklyn	Hicksville & intermediate places	"	"	9½,		26	56¼
"	Greenport " "	"	Tues., Thur. & Sat.,	9½,		95	2 25
"	Hicksville, (Saturd'y to Suffolk)	"	Daily,		4,	26	56¼
Greenport	Brooklyn, (Boston train)	"	"		1,	95	2 25
"	" (accommodation do.)	"	Mon., Wed. & Fri.,			95	2 25
Hicksville	" & intermediate places	"	Daily,	7,	1½,	26	56¼
New York	Albany & Boston via N. Haven	Steamer,	"	6½,		.....	5 00
"	Middletown	New York and Erie,	"	8, 3,		53	.....
Middletown	New York	" "	"	6½,	3½,	53	.....
Philadelphia	Pottsville	Reading,	"	9,		94	3 50
Pottsville	Philadelphia	"	"	9,		94	3 50
New York	Newark	N. J. railroad and trans. co.,	"	9, 11, 12,	2, 3, 4½, 6, 7½,	9¼	25
Newark	New York	[9 A. M. *and* 3 P. M., *connect with Morris Railroad.*]	"	7½, 8½, 9, 11,	1½, 4, 5½, 7, 9½,	9¼	25
"	"		Sundays,	9,	4½,	9¼	25
New York	Newark	[9 A. M. *and* 4½ P. M., *trains, connect with Somerville Railroad.*]	"	11½,	9½,	9¼	25
"	Elizabethtown		Daily,	9, 11,	2, 3½, 4½, 6,	14½	31½
Elizabethtown	New York		"	7, 7½, 8½, 10½, 12,	3½, 5,	14½	31½
New York	Rahway	N. J. railroad and trans. co.,	"	9, 11,	3, 4½, 6,	19½	31½
Rahway	New York	" "	"	6½, 7, 8½, 12,	4½, 9½,	19½	31½
New York	New Brunswick	" "	"	9,	3, 4½,	31½	50
New Brunswick	New York	" "	"	6, 7½, 11½,	8½,	31½	50
"	"	" "	Sundays,	11½,	8½,	31½	50
New York	New Brunswick	" "	"	9,	4½,	31½	50
Philadelphia	New York	Camden and Amboy,	Daily,	7,		91	3 00
New York	Philadelphia	" "	"	5½,		91	3 00
Philadelphia	Bristol	Philadelphia and Trenton,	"	9,		30	75
Bristol	Philadelphia	" "	"		4,	30	75
Philadelphia	Baltimore	Philad. Wil. and Baltimore,	"	8,	4,	93	.....
Baltimore	Philadelphia	" "	"	9,	8,	93	.....
"	Washington	Baltimore and Washington,	"	9,	5, 11½,	41	2 50
Washington	Baltimore	" "	"	6,	5½,	41	2 50
Baltimore	Cumberland and inter. places	Baltimore and Ohio,	"	7½,		.....	.....
"	Frederick " "	" "	"		4,	.....	.....
Cumberland	Baltimore	" "	"	8,		.....	.....
Hancock	"	" "	"	10½,		.....	.....
Martinsburg	"	" "	"	11½,		.....	.....
Harper's Ferry	"	" "	"		12½,	.....	.....
Frederick	"	" "	"		2,	.....	.....
"	"	" "	Sundays,	8,		.....	.....
Ellicott's Mills	"	" "	Daily,	7½, 12,	4½,	.....	.....
Richmond	Petersburg	Richmond and Petersburg,	"	10½,	1½,	.....	.....
Petersburg	Richmond	" "	"	5½,		.....	.....
Albany	Schenectady	Mohawk and Hudson,	"	8,	5½,	.....	.....
Schenectady	Albany	" "	"	9,	3½,	.....	.....
Albany	Saratoga	" "	"	7½,	2,	.....	.....
Saratoga	Albany	" "	"	7,	12½, 5,	.....	.....
Troy	Saratoga	Troy and Saratoga,	"		3½,	.....	.....
Saratoga	Troy	" "	"	7½,		.....	.....
Auburn	Rochester	Auburn and Rochester,	"	8½,		.....	.....
Rochester	Auburn	" "	"	8,	3,	.....	.....
"	Buffalo	Rochester and Buffalo,	"		3,	.....	.....
Buffalo	Rochester	" "	"			.....	.....
"	Falls	Buffalo and Falls,	"	9,		.....	.....
Falls	Buffalo	" "	"		1½,	.....	.....
Buffalo	Albany	Albany and Buffalo	"	8½,		.....	.....

DAVENPORT & BRIDGES' PATENT CAR AND TRUCK.



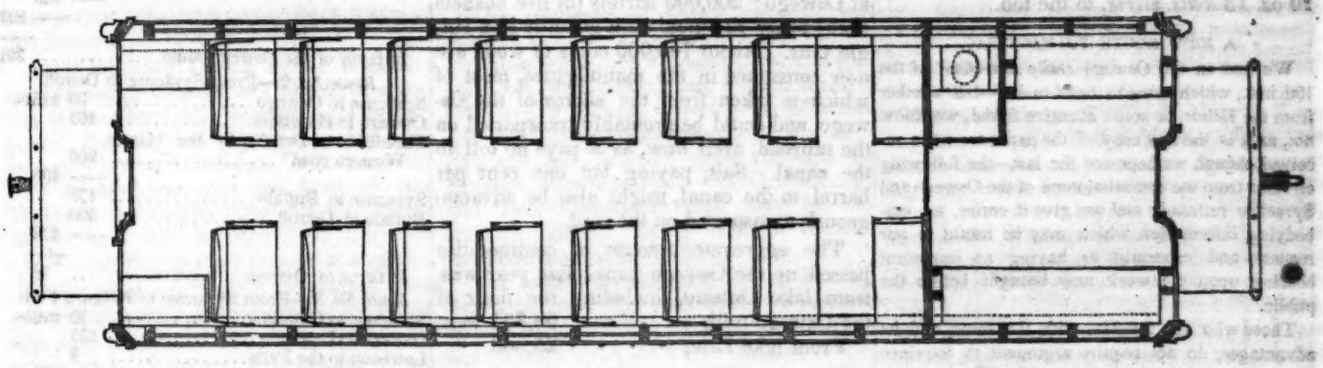


Fig. 1.

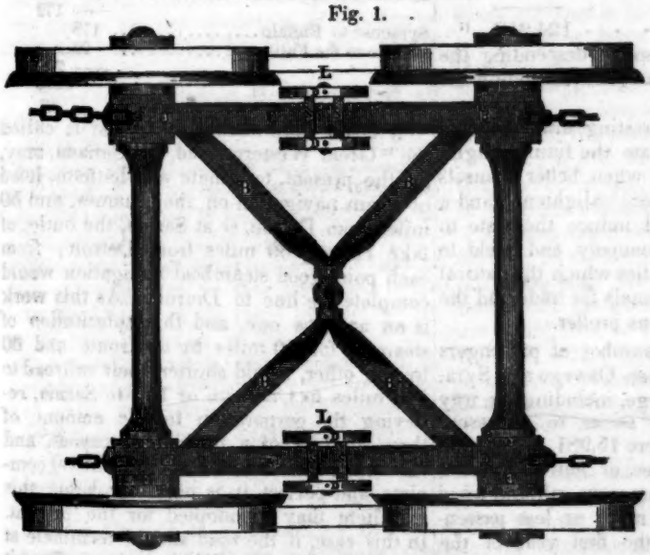
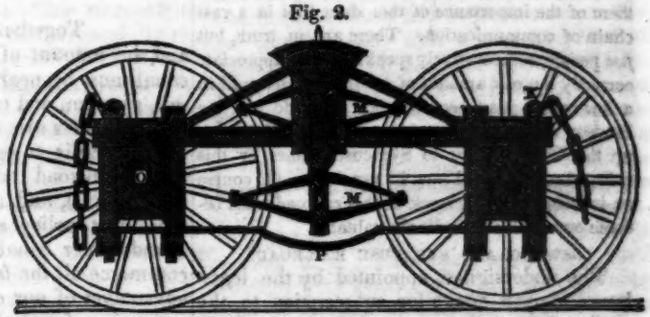


Fig. 2.



DAVENPORT & BRIDGES' IMPROVED PATENT IRON TRUCK FOR RAILROAD CARS, is presented above, and the attention of Railroad Companies is respectfully invited to the following description of their justly-celebrated invention:

Fig. 1 of the drawing above represents a *top view* or plan of our Improved Railroad Truck. Fig. 2 is a central, longitudinal, and vertical section. C, Fig. 1 and 2, represents the arched bars of the side trusses: they consist of two long bars of plate iron (about three inches wide by seven-eighths of an inch thick,) bent into the shape as seen in drawing 2. Each of them is placed directly over a flat and straight tie bar, A, which extends from one end to the other, as seen in Fig. 2. These parts, so arranged, receive between their ends the ends of diagonal cross bars or braces, B, which are united at their centres by being clasped and welded, as seen in Fig. 1. The bars so composing what may be considered as side trusses and diagonal cross braces, rest at their ends upon four pedestals, F, F, which receive the bearings or boxes for the axles to run on. Another flat tie bar, P, extends from the under side of one of the pedestals to that of the other, on the same side of the frame, and the whole is secured together by eight bolts, J, J, passing down through the ends of the several bars, A, B, C, and the pedestals, and on each side of the journals of the axles, O, O, in the positions represented in the drawings. From the above it will be seen that there are two bolts to each pedestal, and that this number is all that is requisite for the full security of the bars and pedestals together. The body rests and moves upon two sectional supports, D D, arranged on the sides of the truss frames, as seen in Fig. 2; they extend somewhat, or a sufficient distance above the truss frames, and are jointed at their lower ends by means of a bolt, L, which rests upon the top of the lower spring, M, which spring rests upon a bolt passing through the lower part of the inverted strap, E, which strap passes over and rests upon the top part of the upper spring, M, which is placed within the truss frame, and rests upon the top of the bar, A.

Two bands, N, N, are passed entirely around the central part of each truss frame, the object of the same being to transfer the strain, or a portion thereof, of the spring, from the tie bar, A, to the arched bar, C.

These Trucks are adapted as well for eight-wheeled passenger cars as for baggage and freight cars, giving to each a more agreeable and easy motion than any other Truck heretofore constructed or in use. They are simple in their construction, combining strength and great durability, although weighing at least twelve hundred pounds less than the common Trucks. Besides these excellences, by reason of the elasticity of the braces, B, B, B, B, as seen in the drawing, and the other peculiarities of construction, the weight is *equalized* upon all the wheels, and yet any one may be raised so as to pass any inequality on the rails without lifting either of the other wheels from the track, thus rendering it almost impossible to run a car off. Being bound, and having as it were but four joinings, they are protected from injury by lateral strains, and in case of damage are easily repaired.

These excellences have been fully tested by use, for a long time, on the Eastern, the Fitchburg and Long Island railroads; and for proof of the above stated superiority of these Trucks over all others, we refer to the experience of those who have used and run them.

CAMBRIDGEPORT, April 1, 1845. DAVENPORT & BRIDGES.

A Modest Proposal.—A petition has been presented to the house from Waterford, containing a pretty strong specimen of what is commonly called "Irish reciprocity." The petitioner prays the house "to introduce a clause into all bills for forming railways in Ireland making it imperative on the companies of all such railways to convey, gratis' a limited number of pedestrians who from poverty are prevented from hiring a mode of conveyance"—[*Railway Express.*]

Austrian Lead Ore.—The following is the assay of a parcel of South Australian lead ore, recently sold in London, the results of which are highly gratifying and encouraging, 45 tons yielded 15 cwt. 2 qrs. lead, and 21 oz. of silver, to the ton of 20 cwt.; and 10 tons yielded 14 cwt. 1 qr. 11 lbs. lead, and 10 oz. 13 dwts. silver, to the ton.

A NEW ROUTE TO MACKINAC.

We find in the Oswego *Daily Advertiser* of the 15th inst., which came to hand to-day—but whether from the Editor, or some attentive friend, we know not, as it is the first copy of the paper we have received, though we hope not the last—the following circular from the commissioners of the Oswego and Syracuse railroad; and we give it entire, as embodying information which may be useful to our readers, and especially as having an important bearing upon the work now brought before the public.

Those who are familiar with the route, and its advantages, do not require argument to convince them of the importance of this short link in a vast chain of communication. There are, in truth, but *few* people, comparatively speaking, who appreciate correctly the *vast* amount of business which will in a few years pass between lake Ontario and the Hudson river; and that business will mainly pass up the Oswego river to Syracuse, either by this railroad or the canal now in use there. Of course an investment in the stock of this railroad must become eventually exceedingly valuable.

OSWEGO AND SYRACUSE RAILROAD.

The undersigned, appointed by the legislature to open books for subscription to the stock of the "Oswego and Syracuse Railroad Company." beg leave to present for public consideration the following facts and statistics; and,

First—*in relation to the feasibility of the route*—A survey has been made by a competent engineer, and a portion of the line has been reviewed by another, yielding the following results:

First, That the valley of the Oswego river affords more than one favorable line on each bank of said river. The length of the lines are from 34 to 36 miles. The ascent gradual, from Oswego to Syracuse, in all about 150 feet. No grade, on the most favorable route, exceeding 20 feet to the mile; no expensive structures, deep cuts or high embankments. The route abounding with timber and saw-mills.

Second, That the cost of construction and equipment, with a fair allowance for right of way, will not exceed $10,000 per mile, provided the flat rail is used.

Traffic or trade.—With grades so favorable, and materials for commerce so abundant, the road should be located with reference to an extensive traffic at a future day, though it may not be deemed expedient to equip it at present with the necessary carriages and locomotives, or a heavy rail. To this end, and with a view to future traffic, it should intersect the villages on the line and near the termination when practical.

Among the prominent articles for commerce are, the flour made at Oswego, Fulton, Phœnix, and Baldwinsville. At Oswego about 300,000 barrels were made last year. Salt, manufactured at the several villages of Liverpool, Salina, Syracuse, and Geddes, destined for the lake markets, as well as wood for its manufacture, would afford a large amount of tonnage, which is rapidly increasing. More than one-third part of the salt made at the salines now seeks a market at Oswego; 200,000 barrels (of five bushels each) being the maximum quantity in a single year. About 100,000 cords of wood are now consumed in the manufacture, most of which is taken from the shores of the Oswego, and could be profitably transported on the railroad, even now, as it pays no toll to the canal. Salt, paying but one cent per barrel to the canal, might also be advantageously transported on the road.

The aggregate amount of commodities passed up the Oswego canal last year was, from lake Ontario, including the flour of the Oswego mill, - - - - 98,354 tons.
From lake Erie, - - - - - 25,866 "

Together, - - - 124,219 "

and the amount of tonnage descending the canal must be nearly as great, including the salt, gypsum, and coal.

These facts are interesting, and will enable the public to estimate the future magnitude of railroad traffic, when better counsels shall prevail, and a more enlightened and a more just policy shall induce the state to abandon her canal monopoly, and yield to commerce all the facilities which the natural advantages of our channels for trade and the enterprize of our citizens proffer.

Passengers.—The number of passengers *through* in 1844, between Oswego and Syracuse, by packet and stage, including the way fare, and dividing it so as to represent *through* passengers, were 15,981. Added to which, there were three or four daily lines of freight boats, and numerous salt and wood boats, all transporting more or less passengers. It is believed the first year of the railroad would double the number of passengers, and that a few years would quadruple them.

This road would divide with the present route the travel to Niagara and Buffalo during the pleasant part of the season; indeed, the packets, tedious as they are, take large numbers of these travellers; and when the projected routes through Canada, looking to the travel of the far west, shall be completed, this route will have strong attractions for *that* travel also, throughout the summer months, and still stronger during the spring and fall months, when the lakes are boisterous.

The following comparison of the several routes for travel will afford data for estimating their respective merits:

Route No. 1.—From Syracuse to Mackinac, by the way of Oswego and Buffalo.

Syracuse to Oswego, railroad	35 miles.	
Oswego to Toronto, lake	140	
Toronto to lake Simcoe, McAdam road	28	
Lake Simcoe, steamer	30	
Lake Simcoe to lake Moanitoulin, plank road	19	
Lake Moanitoulin 120 miles and lake Huron 130 miles	250	
		502
Syracuse to Auburn, railroad	26	
Auburn to Rochester, do.	78	
Tonawanda, do.	43	
Attica to Buffalo, do.	31	
		178
Lake Erie and Detroit river		300
St Clair lake and river	60	
Lake Huron	265	
		325
		803
In favor of the Oswego route		301

Route No. 2.—From Syracuse to Detroit.

Syracuse to Oswego	35 miles.	
Oswego to Hamilton	165	
Hamilton to Detroit, by the "Great Western road"	200	
		400
Syracuse to Buffalo	178	
Buffalo to Detroit	300	
		478
In favor of Oswego		78

Route No. 3.—From Syracuse to Niagara Falls.

Syracuse to Oswego	35 miles.	
Oswego to Lewiston	135	
Lewiston to the Falls	9	
		179
Syracuse to Buffalo	178	
Buffalo to the Falls	22	
		200
In favor of Oswego		21

It is not improbable that what is called the "Great Western Road," in Canada, may, for the present, terminate at Chatham, head of steam navigation on the Thames, and 50 miles from Detroit, *or* at Sarnia, the outlet of lake Huron, 60 miles from Detroit; from each point good steamboat navigation would complete the line to Detroit. As this work is an arduous one, and this substitution of steamers for 50 miles by one route and 60 by the other, would shorten their railroad to 150 miles to Chatham or 140 to Sarnia, relieving the corporation to the amount of three-quarters of a million of capital, and still make their line for summer travel complete and perfect, it is not improbable this expedient may be adopted for the present. In this case, if the road should terminate at Chatham, the traveller bound to Detroit would still gain 78 miles in distance by way of Oswego over the Buffalo traveller. But if it terminates at Sarnia he would also gain the 78 miles to Detroit; and if bound to Mackinac he would add to his gains over his Buffalo competitor the distance between Detroit and Sarnia, on lake Huron, 60 miles, making in all a gain by this route to Mackinac of 133 miles.

If the Canada road should be extended from Hamilton to Buffalo it would add 60 miles to its length, making the distance from Syracuse to Detroit, via Buffalo, by railroad, 438 miles against 400 by way of Oswego.

All these comparisons give to Oswego an

advantage in point of distance, and a still greater advantage in point of time and in the comfort of the traveller.

The alternations from steamer to railroad, by the Oswego route, enables the traveller to escape fatigue, and at the same time prosecute his journey during night time. Thus, one night brings him from New York to Albany, 150 miles; the next day by railroad to Oswego, 182 miles; the second night he passes over lake Ontario to Toronto or Hamilton, if the latter 165 miles; and the second day to Detroit, by railroad, 200 miles. Thus, two days and nights convey the traveller from New York to Detroit, 697 miles, or to lake Huron, without fatigue or interruption to his accustomed repose. It is believed no section of our wide country affords such facilities and combines such advantages for rapid and comfortable travel as this line will do when perfected.

After reaching Detroit by the respective routes through Canada, or lake Erie, a portion of the travel, and perhaps a large portion of that destined for Illinois, Missouri, and the lower Mississippi, will cross the state of Michigan and the head of lake Michigan to Chicago; but this travel from Detroit east will be shared by the rival routes according to their respective merits.

From Mackinac to the Mississippi there will be two great thoroughfares for travel, open and common to both these eastern rival routes above described, through lake Ontario and across the peninsula of Canada on the one hand, and lake Erie, &c., on the other.

The two routes to the Mississippi are from Mackinac to Chicago, 345 miles, thence across the state of Illinois, about 160 miles, together 505 miles; *or* from Mackinac to the head of Green Bay, 180 miles, thence up the Fox and lake Winnebago and down the Wisconsin, say about 210 miles, together 390 miles. This latter route passes through the entire breadth of Wisconsin and strikes the Mississippi on the same parallel of latitude with Syracuse, at the centre of Iowa from north to south, and the heart of the mineral region of Wisconsin and Iowa, both of which are destined to be populous and commercial states. The travel of these two future states having reached Mackinac bound east, can hardly be diverted from the short, cheap, and pleasant route of 502 miles through Canada to Syracuse, for the more circuitous one through the large lakes of 803 miles to the same destination.

This northern travel, therefore, of Iowa and Wisconsin, and the shores of lake Superior may be counted on with confidence as tributary to the Oswego and Syracuse railroad. Facilities are in progress to meet the wants of the traveller on this new and short route.

Steamers are now plying on lakes Simcoe and Manitoulin, as also on the Fox and Wisconsin rivers. A McAdam road has been constructed between Toronto and lake Simcoe, and a plank road from lake Simcoe to Manitoulin, 19 miles. A good road is now in progress of construction around the rapids of the Fox by the local authorities, which will be eight miles in length. The portage of one mile between the Fox and Wisconsin has long been in use, and may at small expense be converted to a railroad or canal.

While Buffalo will, from its magnitude and extensive commercial dealings, attract travel strongly, yet the superior advantages of the Oswego route, it is believed, will at least divide with Buffalo the travel of the far west. Aside from this western travel, the region contiguous to lake Ontario must furnish for this line a very large amount of travel and trade during eight months of the year. This lake and the St. Lawrence have a coast of 600 miles, surrounded by a fine country, already and fast becoming populous and highly commercial.

The peninsula of Upper Canada, surrounded by lakes Ontario, Erie, Huron, and Manitoulin, has a genial climate, a generous soil, and already has a population of over half a million, three-fourths of whom will hold their intercourse with the New England and Atlantic states through this channel, notwithstanding the Ogdensburgh and lake Champlain road may be constructed, and the "Great Western" Canada road be extended to Buffalo.

For manufacturing purposes, it is confidently believed that no section of our state affords such facilities as these 35 miles of the Oswego river, on whose banks the projected railroad is to run. This river drains a country as large as that drained by the Hudson, and a more equable discharge, its waters being first collected by numerous lakes, and discharged by an equable volume throughout the seasons of flood and drought, and over a fall, in these 35 miles, of 120 feet, divided in the best manner for hydraulic purposes throughout the line.

A canal along the banks of this river connects it, for commercial and manufacturing purposes, with the Hudson, the St. Lawrence, and the great lakes; the salt works are established at one end of this canal and railroad, with flouring mills throughout the entire line, fed from the great wheat region of the west, through the Welland canal, one of the most perfect works of the kind on the continent.

With such advantages, present and perspective, this cheap, short road, of 35 miles, with an easy grade, which fits it admirably for the immense commerce which awaits it at no distant period, cannot disappoint its projectors and patrons, but must, with ordinary skill and prudence in its management, yield a large return for capital invested.

DAVID P. BREWSTER,
JOHN WILKINSON,
ALVIN BRONSON,
LUTHER WRIGHT,
SYLVESTER DOOLITTLE,
HENRY FITZHUGH,
GEO. F. FALLEY,
PHILLIP HART, Jr.,
OTIS BIGELOW,
ASHBEL KELLOGG,
B. DAVIS NOXEN,
THOS. M'CARTY,
JAMES R. LAWRENCE,
Commissioners.

NEW LINE OF COMMUNICATION BETWEEN THE MISSISSIPPI AND THE LAKES.

We find the following article in the National Intelligencer, copied from the Cincinnati Atlas, descriptive of a new route to the Mississippi. There was an effort made in '37 or '38 to open a communication by canal between these waters. A charter was obtained and the work, we believe, commenced, but the disasters of that period prevented its completion, at that time. It will, however, be again resumed and completed, when it will become a thoroughfare for Wisconsin, Iowa and the far west.

We mentioned a few days since, on the authority of the Buffalo Commercial, that Captain Hotaling had succeeded in establishing a line of steamboats between Green Bay, on lake Michigan, and the Mississippi. This route is said to be one of the most picturesque in the United States; and will, in the course of a few years, become a favorite with the pleasure-hunting portion of the community, if for no other purpose than for the beauty of its scenery.

From a notice in the Galena Gazette of an experimental trip of the *Maid of Iowa*, we learn that she ascended the Wisconsin as high as Point Boss. That point is at the lower end of the rapids of the Wisconsin, and is the southern extremity of the great Northern Wisconsin Pinery. It is 130 miles above fort Winnebago, and 100 miles above where any steamboat has ever before been. She passed the dreadful Dells, which are mentioned so often by Indian traders, and which map-makers note so particularly. No one can form any idea of the grandeur of these rocks, which the river passes through. They are 8 miles in length, from the head to the foot, and present the most wild and picturesque view imaginable. For the distance of one mile the Wisconsin is crowded into a space of less than 50 feet in width, and the rocks on either side project in awful grandeur and sublimity. The gulf of Niagra is nothing to it. The Maid crowded herself through it by steam, going up, and returning dropped through with an oar on each end to keep her straight, such as are used by raftmen in running lumber.

The *Maid of Iowa* will be run as a regular packet between Galena and fort Winnebago, where she will connect with the *Manchester*, running on lake Winnebago. On this end of the route, the *Enterprize*, thus making a regular steamboat line from Galena to Green Bay. The *Maid of Iowa* and *Manchester* come within sight of each other at fort Winnebago, and have their trips so arranged as to meet there each time, where a portage of one mile only divides them. The *Manchester* and *Enterprize* are also seperated by a portage of 6½ miles at the outlet of the lake. Thence to Green Bay there is no obstruction—making the whole distance from the Wisconsin to the great lakes with but 7½ miles of land carriage.

It is the intention to keep up the line throughout the season of navigation, and by it, the Gazette says, goods can be delivered from the lakes, at any point on the Mississippi above Galena, for $1 25 a hundred pounds.

ENGLISH RAILROAD SHARE-LIST.

NAME OF RAILWAY.	Miles opened.	Total sums, in pounds, authorized to be raised by shares.	Total sums, in pounds, authorized to be raised by loan or mortgage.	Total sums, in pounds, expended at dates of latest balance sheets.	Cost of working, in pounds, for six months as stated in latest balance sheets.	Total earnings, in pounds, for six months as stated in latest balance sheets.	Dividend at last meeting. Per share. £	s.	d.	Per cent. per annum. £	s.	d.	Paid on share.	Value of share.
Arboath and Forfar	15	102,000	35,000	138,870	.....	.....	0	12	6	2	10	0	25	27
Birmingham and Gloucester	55	1,187,500	407,336	1,500,806	39,261	53,203	1	5	0	2	10	0	100	100
Brandling Junction	23	161,700	365,470	481,452	.....	.....	.....			4	10	0	50	54
Bristol and Gloucester	37¼	400,000	211,000	.....	.....	.....	.....			nihil.			30	36
Chester and Birkenhead	14¼	750,000	143,170	518,989	5,856	13,148	0	8	6	1	14	0	50	32
Dublin and Drogheda	31	450,000	150,000	500,869	.....	.....	.....			nihil.			55	72
Dublin and Kingston	6	200,000	152,200	359,000	.....	.....	6	0	0	6	0	0	100	166
Dundee and Arbroath	16¼	100,000	49,445	153,416	2,989	6,993	1	5	0	5	0	0	25	29
Durham and Sunderland	18¼	169,350	124,055	270,392	9,889	17,702	.....			nihil.			34	29
East County and North and East	86¼	4,443,200	1,341,155	3,931,905	47,385	118,726	1	6	6	.....			45	57
Edinburg and Glasgow	46	1,125,000	375,000	1,649,523	29,429	55,866	1	2	6	4	10	0	50	57
Glasgow, Paisley and Ayr	51	937,500	.....	1,066,951	12,446	36,736	1	2	6	4	10	0	50	60
Glasgow, Paisley and Greenock	22¼	650,000	216,666	787,884	11,572	23,177	0	5	0	2	0	0	25	12
Grand Junction	104	2,478,712	.....	2,453,169	84,309	195,080	5	0	0	10	0	0	100	210
Great North of England	45	969,000	581,017	1,262,518	12,201	36,189	1	12	6	3	5	0	100	119
Great Western	121¼	4,650,000	3,679,343	7,272,539	132,235	369,904	3	10	0	7	0	0	75	138
Hartlepool	15¼	438,000	156,540	719,205	.....	.....	.....			8	0	0	100	...
Leicester and Swannington	16¼	140,000	.....	140,000	2,207	6,317	1	5	0	5	0	0	50	...
Liverpool and Manchester	32	1,209,000	497,750	1,739,835	57,239	117,559	5	0	0	10	0	0	100	203
Llanelly	27	200,000	44,000	221,624	.....	.....	1	0	0	2	0	0	87	...
London and Birmingham	112¼	6,874,976	1,928,845	6,393,468	92,823	405,768	.....			10	0	0	100	218
London and Blackwall	3¼	804,000	266,000	1,315,640	15,978	23,870	.....			.....			16	6
London and Brighton	56	1,793,800	998,350	2,630,451	29,372	84,880	0	12	0	2	8	0	50	47
London and Croyden	8¼	550,000	229,000	761,885	7,583	10,545	0	5	0	2	10	0	14	17
London and Greenwich	3¼	759,383	233,300	1,040,930	15,193	28,933	.....			nihil.			13	10
London and South Western	92¼	2,222,100	630,100	2,596,291	68,457	150,469	1	12	6	6	10	0	41	73
Manchester and Birmingham	31	2,100,000	690,586	1,923,699	15,397	58,162	1	0	6	5	0	0	40	48
Manchester and Bolton	10	778,100	197,730	773,743	8,585	21,140	2	2	0	4	10	0	93	110
Manchester and Leeds and Hull	81	2,937,500	1,943,932	3,921,593	46,653	156,761	.....			7l. & 10l.			60	88
Midland railway	178¼	5,158,900	1,719,630	6,279,056	76,983	281,898	.....			.....			100	96
Newcastle and Carlisle	61	878,240	188,563	1,135,069	26,499	73,947	4	0	0	4	0	0	100	105
Newcastle and Darlington	23	500,000	.....	405,728	.....	.....	.....			nihil.			21	49
Newcastle and North Shields	7	150,000	153,876	309,629	8,943	18,466	.....			2	0	0	50	37
North Union	39	739,201	308,306	1,015,447	9,071	37,794	2	10	0	6	16	8	100	104
Paris and Orleans	82	1,600,000	400,000	1,978,415	.....	.....	0	16	0	8	0	0	20	39
Paris and Rouen	84	1,440,000	.....	.....	31,247	91,171	.....			8	0	0	20	38
Preston and Wyre	19	830,000	179,852	355,161	4,191	7,066	.....			nihil.			50	18
Sheffield and Manchester	19	1,150,000	311.759	951,455	11,895	14,876	.....			nihil.			82	93
South Eastern	88	2,996,000	1,530,277	3,464,172	40,993	81,482	0	10	6	2	2	0	50	39
Taff Vale	30	465,000	154,785	590,006	8,509	18,414	1	0	0	6	5	0	100	55
Ulster	25	519,150	20,000	348,626	5,401	13,856	0	15	0	5	1	8	29	37
Yarmouth and Norwich	20¼	187,500	62,500	230,250	.....	.....	.....			nihil.			16	25
York and N. Mid. and Leeds and Selby	28	1,062,500	167,500	676,644	27,132	55,752	2	10	0	10	0	0	50	100

NEW AND PROPOSED RAILWAYS.	Share Capital.
Aberdeen	1,600,000
Barnsley Junction	200,000
Belfast and Ballymena	385,000
Blackburn and Accrington	400,000
Birk. and Ches. Junction	1,000,000
Bolt., Wigan and Liverpool	800,000
Caledonian	1,800,000
Cambridge and Lincoln	1,250,000
Chatham and Portsmouth	5,000,000
Chester and Wrexham	120,000
Churnet valley	1,800,000
Direct Northern to York	4,000,000
Dublin and Belfast	950,000
Dundee and Perth	250,000
Edinburg and Northern	800,000
Ely and Bedford	270,000
Glosgow, Dum. & Carlisle	1,300,000
Gt. South and West Ext	1,200,000
Gt. Grimsby and Sheffield	600,000
Harwich and E. coun. Jun.	160,000
Huddersfield & M. rl. & cl.	600,000
Kendal and Windermere	125,000
Leeds and Dewsbury	400,000
Leeds and Thirsk	800,000
Liv. Ormskirk and Preston	600,000
London and Portsmouth	1,750,000
London and York	5,000,000
Londonderry & Enniskillen	500,000
Lynn and Ely	200,000
Manchester, Bury and Ross	300,000
Manchester and Buxton	250,000
Mullingar and Athlone	.....
Newcastle and Berwick	700,000
Richmond & W. End Junc.	.....
Scottish Central	700,000
Sheffield and Lincolnshire	650,000
Shrewsbury and Gd. Junc.	400,000
Shrew. Wolv. Dudly & B.	900,000
Trent Valley	900,000
West London Extension	64,000
West Yorkshire	1,000,000
Whitehaven and Maryport	100,000
FRENCH RAILWAYS.	
Boulogne and Amiens	1,500,000
Central of France	1,280,000
Lyons and Avignon	2,400,000
Orleans, Tours & Bordeaux	2,000,000
Paris and Lyons	2,500,000
Paris and Orleans	1,600,000
Paris and Rouen	1,400,000

Steam and Miscellaneous.

NAME OF COMPANY.	Num. of shares.	Am't. of share.	Amount paid.	Div. p.c. per ann.	Last price.	Present price.
Anglo Mexican Mint	10,000	10	10	.....	15½	15½
Anti Dry Rot	10,000	.....	18¼	.....	2	.....
Australian Trust Company	5,700	100	35	.....	34½	.....
General hteam Navigation	20,000	15	14	10	27½	27
Gt Western Steam Pa	.....	.....	100	.....	25	.....
Metropolitan Wood Pav	15,000	10	6	5	6¼	.....
Patent Elastic Pav	10,000	1	1	5	1¼	.....
Peninsular and Oriental	11,493	50	50	7	64¼	65
Ditto	3,200	50	40	7	.....	.....
Polytechnic Institution	.....	.....	.....	6	.....	.....
Reversionary Int. Soc	5,387	100	100	4½	104	104
R. Mail Steam Packet	15,000	100	60	.....	36½	37
South Western Steam	4,000	25	5	.....	.....	.....
Ship Owners' Towing	3,000	10	7½	10	15	.....
Thames Tunnel	4,000	50	50	.....	.....	.....
University College	1,500	100	100	.....	.....	.....

Canals.

Ashby de la Zouch	1,432	113	av.	4	70	70
Barnsley	720	100	100	14	180	180
Birmingham, 1-16 share	3,000	118¾	79	10	150	160
Do. and LiverpoolJunction	4,000	160	100	.....	13½	13½
Coventry	500	100	100	20	365	365
Cromford	460	do.	do.	24	250	250
Derby	600	do.	do.	9	105	105
Erewash	231	do.	do.	32	440	440
Forth and Clyde	1,297	400¼	40¼	4	440	440
Grand Junction	11,600	100	100	7	162	161½
Grand Surrey	1,500	do.	do.	.....	20	.....
Gloucester and Rerkley	5,000	do.	do.	.....	8	8
Grantham	749	150	150	8	185	185
Lancaster	11,699	47½	47½	3	40	40
Leeds and Liverpool	2,897	100	100	34	640	640
Leicester	545	140	140	9	139	139

NAME OF COMPANY.	Num. of shares.	Am't. of share	Amount paid.	Div. p.c. per ann.	Last price.	Present price.
Loughborough	70	142½	142½	70	1140	
Monmouthseire	2,409	100	100	10	160	160
Melton Mowbray	250	100	100	10	117	117
Mersey and Irwell	500	100	100	10		
Macclesfield	3,000	100	100	2½	15	15
Neath	247	100	100	17	365	365
Oxford	1,786	100	100	30	505	
Regents or Loncon	21,418	33¼	33¼	2½	25	25
Shropshire	500	125	125	6	120	120
Somerset coal	800	150	150	7½	123	123
Stafford and Worcester	700	140	140	25	480	480
Shrewsbury	500	125	125	12	230	230
Stourbridge	300	145	145	14	360	360
Stroudwater	200	150	150	19		
Swansea	533	100	100	15	240	240
Severn & Why & Rail Av.	3,762	26½	26½	5½	30	30
Trent and Mersey	2,600	50	50	65	495	
Thames and Medway	8,149	19½	19½	.....	10	10
Warwick and Birmingham	,000	100	100	10½	167	
Warwick and Napton	980	100	100	8½	122	

Water Works.

Birmingham	4,800	25	25	3½	28	28
East London	4,433	100	100	8	223	225
Grand Junction	5,500	av.	41 2-3	7½	88	90
New River L. B. Ann	1,500			2½		
Manchester and Salford	6,486	av.	30	8½	57	57
Vauxhall, lt. S. London	1,000		100	5	55	55
West Middlesex	8,294	av.	63½	6½	126	127

Docks.

Commercial Dock	1,065	100	100	3	80	
East and West India		sto.		5½	137	
London	3,238,310	sto.		4½	114¼	115
St. Katharine	1,352,752	sto.		5	116	171
Southampton	7,000	50	50			

AMERICAN STATE WORKS AND CANALS, ETC.

	STATE WORKS.	Length in miles.	Cost.	1843. Income.	1843. Expend.	1844. Income.	1844. Expen
N. Y.	1 Black river canal	35	1,524,967	.....	.....	.....	.....
"	2 Cayuga and Seneca	21	237,000	16,557	10,953	24,618	14,443
"	3 Champlain canal	64	1,251,604	102,308	.....	116,739	.....
"	4 Chemung	23	684,600	8,140	14,486	14,385	12,740
"	5 Chenango	97	2,420,000	16,195	15,967	22,179	15,960
"	6 Crooked lake	8	156,777	461	3,674	1,498	3,951
"	7 Erie—enlargement of	363	12,648,852	1,880,316	.....	.....	.....
"	8 Genessee valley	120	3,739,000	.....	.....	.....	.....
"	9 52 miles opened, cost $1,500,000	.....	.....	12,292	13,819	19,641	15,557
"	10 Oneida lake	6	50,000	225	2,239	621	1,636
"	11 Oswego	38	565,437	29,147	22,742	56,165	28,599
Pa.	12 Beaver division canal	25	.....	.....	.....	7,381	5,386
"	13 Delaware canal	60	.....	.....	.....	109,278	22,870
"	14 French creek	45	.....	.....	.....	.....	.....
"	15 Seneca river towing path	.....	69,276	.....	.....	381	.....
"	16 Columbia railroad	82	.....	.....	.....	443,336	205,067
"	17 Eastern division	36	.....	.....	.....	179,781	138,915
"	18 Juniata canal	93					
"	19 Portage railroad	130	.....	.....	.....	351,102	248,943
"	20 Western division canal	105					
"	21 North branch Susquehannah canal	73					
"	22 West " " "	72	.....	.....	.....	101,949	57,633
Ohio	23 Hocking canal	56	975,130	4,757	.....	5,286	4,139
"	24 Miami canal	85	1,660,742	68,640	38,826	77,844	22,341
"	25 Miami extension	105	2,856,636	8,291	.....	12,723	14,741
"	26 Miami northern division	35	322,000	.....	.....	unfin'd.	.....
"	27 Muskingum	91	1,627,318	23,167	.....	29,385	15,027
"	28 Ohio	334	4,600,000	322,754	123,398	343,711	113,210
"	29 Wabash	91	3,028,340	35,922	6,400	48,589	12,817
"	30 Walhonding	25	607,269	838	39,005	1,977	1,238
"	31 Western road	31	255,015	7,254	1,782	8,747	2,929
Ind.	32 Sundry works	.....	11,000,000	.....	.....	.....	.....
"	33 Maume canal	.....	.....	.....	.....	.....	.....
Ill.	34 Sundry works	.....	10,000,000	.....	.....	.....	.....
Mich	35 Central railroad	110	1,842,308	149,987	75,960	211,170	89,420
"	36 Southern railroad	68	936,295	24,064	7,907	60,341	70,000

The State Canals are all 4 feet deep, and the locks a 13 to 17 feet wide, and 80 to 90 feet in length.

The six millions paid to the canal fund from auction and salt duties are not included in the estimate of cost. The Genesee valley and the Black river canals require large sums for their completion, the interest of which *additional* sum is much greater than the estimated gross income of these canals when finished. The sums required to complete these two canals are $2,000,000 and $600,000, making their total cost when finished $5,553,000 and $2,409,000; an expenditure incurred on estimated incomes (admitted to be liberal,) of $39,000 and $14,000 respectively.

The total receipts from the works of Pennsylvania for 1843 were $1,019,401; for 1844 $1,164,326, and the cost about 30 millions.

The receipts for 1844 were as follows:

Canal tolls,	578,404
Railroad tolls,	252,855
Motive power,	319,590
Trucks,	13,477

of which $585,922 is from 118 miles of railroad and $578,404 from 550 miles of canal.

The canals of Ohio are supported by a property tax of 5½ mills on the dollar. There are 853 miles of canal in the State, which yielded in 1843 $471,623, and in 1844 $515,393, the cost, 1st Jan. '43 being $15,577,233. The increase of '44 over '43 is only $43,770, though the year '44 has exhibited a greater increase throughout the country than ever before known.

These 21 millions on sundry works yield no income whatever.

The central railroad yields above 6 per cent., and is the only State work—the Erie canal excepted—which is able to stand alone.

	CANALS.	Length in miles.	Cost.	1843. Income. Gross.	1843. Income. Nett.	Div. per cent.	1844. Income. Gross.	1844. Income. Nett.	Div. per cent.	Value of stock.
	Blackstone	.....	.....	.....	.....	....	.....	.....	....	.....
	Bald Eagle Navigation	25	400,000	.....	.....	....	.....	.....	....	.....
	Beaver and Sandy, (part)	.....	1,000,000	.....	.....	....	.....	.....	....	.....
	Charleston, (S. C.)	.....	.....	.....	.....	....	.....	.....	....	.....
	Chesapeake and Ohio	184	12,370,470	47,637	.....	....	.....	.....	....	.....
	Conestota	12	300,000	.....	.....	....	.....	.....	....	.....
	Delaware and Chesapeake	13	.....	.....	.....	....	.....	.....	....	26
	Schuylkill	108	3,500,000	279,795	102,221	....	190,693	120,624	....	31
	Farmington	.....	.....	.....	.....	....	.....	.....	....	.....
	James river and Kenhawa	.....	.....	.....	.....	....	.....	.....	....	.....
	Middlesex	.....	.....	.....	.....	....	.....	.....	....	.....
	Port Deposit	10	200,000	.....	.....	....	.....	.....	....	.....
	Delaware and Raritan	43	2,900,000	99,623	53,327	....	131,491	84,455	....	.....
	Southwark	.....	300,000	.....	.....	....	.....	.....	....	.....
	Tide Water	45	2,900,000	.....	.....	....	.....	.....	....	.....
	Union	80	2,000,000	.....	.....	....	.....	.....	....	.....
	Morris	101	1,000,000	.....	.....	....	.....	.....	....	28
	Dismal Swamp	.....	.....	.....	.....	....	.....	.....	....	.....

REMARKS.

We may, perhaps, at some future time be enabled to give the particulars of all these canals.

The Chesapeake and Ohio canal is not yet completed to the coal mines, hence its trifling income.

The enlargement of the Schuylkill canal has been commenced.

The Morris canal was lately sold for one million, about one-fourth of its cost. It is said in the papers that it is to be enlarged. We have seen no report, nor heard of the appointment of any engineer.

CANADIAN CANALS.	Length in miles.	No. of locks.	Lockage in feet.	Size of locks. Length of chamber.	Size of locks. Width.	Depth on mitre sill.	Width of canal. Bottom.	Width of canal. Surface.	Estimate.	Expended to Sept. 1843.	Income. 1843.	Income. 1844.
The Welland canal	.....	.....	.....	feet.	feet.	feet.	feet.	feet.	3,948,572	2,485,572	64,658	
Main trunk from Port Colborne to Port Dalhousie	28	31	328	150	26 1-2	8 1-2	45	81	.....	.....		
Junction branch to Dunville	21	1	6	150	26 1-2	8 1-2	35	71	.....	.....		
Broad creek branch to Port Maitland	1 1-2	1	6	200	45	9	45	85	.....	.....		
The St. Lawrence canal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Galops and Port Cardinal	2	2	7	200	45	9	50	90	.....	.....		
Rapid Plat	4	2	11 1-2	200	45	9	50	90	672,498	973		
Farren's point	3-4	1	3 1-2	200	45	9	50	90	.....	.....		
Cornwall, passing the Long Sault rapids	11 1-2	7	48	200	55	9	100	150	865,372	1,665,663		
Beauharnois, do. Coteau, Cedars and Cascades road	11 1-4	9	82 1-2	200	45	9	80	120	1,190,087	275,426		
Lachine, do. Lachine rapids	8 1-2	5	44 1-2	200	45	9	80	120	old canal	400,000	29,288	
Elargement of do.	.....	.....	.....	.....	.....	.....	.....	.....	1,001,333	64,439		
Total from lake Erie to the sea	12	57	525									
Chambly	66	9	74	120	24	6	36	60	200,000	440,000	1,409	

	COAL COMPANIES.	Length in miles. R. rd.	Length in miles. Canals.	Cost.	1843. Income. Gross.	1843. Income. Nett.	Div. per cent.	1844. Income. Gross.	1844. Income. Nett.	Div. per cent.	Value of stock.	REMARKS.
	Delaware and Hudson	16	108	2,800,000	930,203	196,702	10	.....	.....	....	130	
	Lehigh	20	72	6,000,000	.....	.....	....	.....	.....	....	31	

AMERICAN RAILROADS.

		RAILROADS.	Length in miles.	Cost.	Loans and debts.	Number of shares.	Paid on shar e	1843. Income. Gross.	1843. Income. Nett.	Div. per cent.	1844. Income. Gross.	1844. Income. Nett.	Div. per cent.	Previous prices.	SALES. Week ending July 16. Shares.	SALES. Week ending July 16. Price
Me.	1	Portland, Saco and Portsmouth	50	1,200,000	.....	.....	....	89,997	47,166	7	131,404	62,172	6	103½	5	103½
N. H.	2	Concord	35	750,000	.....	.....	....	.....	.....	....	.....	.....	12	65	.....	.....
Mass.	3	Boston and Maine	56	1,485,461	.....	.....	....	178,745	68,499	6	233,101	86,401	6½	117	8	114½
"	4	Boston and Maine extension	17 1-4	455,703	unfin.	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	5	Boston and Lowell	26	1,863,746	.....	.....	....	277,315	144,000	8	316,909	147,615	8	120	4	11 ½
"	6	Boston and Providence	41	1,886,135	none.	18,600	100	233,388	110,823	6	282,701	156,109	6	114	.....	.....
"	7	Boston and Worcester	44	2,914,078	.....	.....	....	40,141	162,000	6	428,437	195,163	7½	120½	54	1
"	8	Berkshire	21	250,000	not stated	.....	.....	.....	17,500	7	17,737	.....	.....	.....	.....	.....
"	9	Charlestown branch	.....	280,260	.....	.....	....	.....	.....	13	34,654	13,971	5½	112½	50	80
"	10	Eastern	54	2,388,631	.....	.....	....	279,563	140,595	6	337,238	227,920	8	113½	275	108½
"	11	Fitchburg	50	1,150,000	just opn'd	.....	....	.....	.....	....	42,759	26,835	....	124	.....	.....
"	12	Nashua and Lowell	14 1-2	380,000	.....	.....	....	84,079	.....	8	94,588	34,944	10	123	.....	.....
"	13	New Bedford and Taunton	20	430,962	.....	.....	....	50,671	24,000	6	64,998	24,000	6	.....	.....	.....
"	14	Northampton and Springfield	.....	172,883	unfin.	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	15	Norwich and Worcester	59	2,170,366	900,000	16,535	100	162,336	24,871	....	230,674	99,464	3	71½	3,355	71½
"	16	Old Colony	.....	87,920	unfin.	.....	....	.....	.....	....	.....	.....	....	106	.....	.....
"	17	Stoughton branch	4	63,075	unfin.	.....	....	.....	.....	....	.....	.....	....	.....	.....	.....
"	18	Taunton branch	11	250,000	.....	.....	....	.....	20,000	8	96,687	20,000	8	118	.....	.....
"	19	Vermont and Massachusetts	.....	.....	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	20	West Stockbridge	3	41,516	200	.....	100	.....	.....	....	.....	.....	4	.....	.....	.....
"	21	Western, (117 miles in Mass.,)	156	7,686,202	4,686,202	30,000	....	573,882	284,432	....	753,753	439,679	3	101	320	102½
"	22	Worcester branch to Milbury	.....	8,431	506	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	23	Housatonic, (10 months,)	74	1,244,123	.....	.....	.....	.....	.....	....	150,000	.....	....	31	.....	.....
Con	24	Hartford and New Haven	38	1,100,000	100,000	10,000	100	.....	.....	....	.....	.....	6	95	25	93
"	25	Hartford and Springfield	25 1-2	600,000	400,000	2,000	100	.....	.....	....	.....	.....	....	.....	.....	.....
"	26	Stonington, (year ending 1st Sept.,)	48	2,600,000	650,000	13,000	100	113,889	.....	....	154,724	79,845	....	29	625	28½
N. Y.	27	Attica and Buffalo	31	336,211	.....	.....	.....	45,896	7,522	....	73,248	48,033	0	.....	.....	.....
"	28	Auburn and Rochester	78	1,796,342	200,000	14,000	100	189,693	112,000	....	237,667	152,007	6	109½	10	109
"	29	Auburn and Syracuse	26	766,657	.....	.....	133⅓	86,291	27,334	....	96,738	52,544	6	116	.....	.....
"	30	Buffalo and Niagara	22	200,000	.....	1,500	....	.....	.....	....	.....	.....	....	100	.....	.....
"	31	Erie, (446 miles,)	.....	5,000,000	.....	.....	.....	.....	.....	....	.....	.....	....	29	1,325	30
"	32	Erie, opened	53	.....	.....	.....	.....	.....	48,000	....	126,020	59,075	....	.....	.....	.....
"	33	Harlem	26	1,206,231	.....	.....	.....	.....	.....	....	140,685	62,399	....	69½	170	69½
"	34	Hudson and Berkshire	31	575,613	.....	.....	50	.....	.....	....	35,029	1,789	0	11½	.....	.....
"	35	Long Island	96	1,610,221	392,340	29,846	....	.....	.....	....	153,456	58,996	0	71	7,380	68½
"	36	Mohawk and Hudson	17	1,317,893	400,000	10,000	100	69,948	58,780	....	79,804	45,763	0	58½	.....	.....
"	37	Saratoga and Schenectady	22	303,658	.....	.....	.....	42,242	3,000	1	34,666	8,455	0	.....	.....	.....
"	38	Schenectady and Troy	20 1-2	640,800	.....	.....	.....	28,043	.....	....	32,646	6,365	0	.....	.....	.....
"	39	Syracuse and Utica	53	1,115,897	none.	16,000	62½	163,701	72,000	....	192,061	120,992	8	117	.....	.....
"	40	Tonnawanda	43	727,332	.....	.....	.....	76,227	.....	....	114,177	75,865	5	.....	.....	.....
"	41	Troy and Greenbush	6	180,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	42	Troy and Saratoga	25	475,801	.....	.....	.....	44,325	21,000	....	38,502	9,971	2½	.....	.....	.....
"	43	Utica and Schenectady	78	2,168,165	none.	20,000	100	277,164	180,000	9	331,932	199'094	8	132	20	132
N. J.	44	Camden and Amboy	61	3,200,000	.....	.....	.....	682,832	383,880	....	784,191	404,956	....	113	.....	.....
"	45	Elizabethtown and Somerville	26	500,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	46	New Jersey	34	2,000,000	.....	.....	.....	.....	.....	....	.....	.....	....	95	100	95½
"	47	Paterson	16	500,000	.....	.....	.....	.....	.....	....	.....	.....	6	90	1,225	88½
Pa.	48	Beaver Meadow	26	1,000,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	49	Cumberland Valley	46	1,250,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	50	Harrisburg and Lancaster	36	860,000	.....	.....	.....	.....	.....	....	.....	.....	....	30	.....	.....
"	51	Hazleton branch	10	120,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	52	Little Schuylkill	29	900,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	53	Blossburg and Corning	40	600,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	54	Mauch Chunk	9	100,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	55	Minehill and Schuylkill Haven	18	315,000	.....	.....	.....	.....	.....	12	.....	.....	....	80	.....	.....
"	56	Norristown	20	800,000	.....	.....	.....	.....	.....	....	.....	.....	....	6½	.....	.....
"	57	Philadelphia and Trenton	30	400,000	.....	.....	.....	.....	.....	....	.....	.....	....	104	.....	.....
"	58	Pottsville and Danville	29 1-2	1,500,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	59	Reading	94	9,457,570	7,447,570	40,200	50	.....	.....	....	597,613	343,511	....	58	2,330	57
"	60	Schuylkill valley	10	1,000,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	61	Williamsport and Elmira	25	400,000	.....	.....	.....	20,000	.....	....	.....	.....	....	.....	.....	.....
"	62	Philadelphia and Baltimore	93	4,400,000	.....	.....	.....	43,043	200,000	....	.....	210,000	....	15½	11,831	15½
Del.	63	Frenchtown	16	600,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
Md.	64	Baltimore and Ohio, (1st Oct.)	188	7,623,600	.....	.....	.....	575,235	279,402	....	658,620	346,946	....	49½	37	48½
"	65	Baltimore and Susquehanna	58	3,000,000	.....	.....	.....	.....	.....	....	.....	.....	....	2½	.....	.....
"	66	Baltimore and Washington	38	1,800,000	.....	.....	.....	177,227	71,691	....	212,129	104,529	....	84	.....	.....
Va.	67	Greensville and Roanoke	17 1-2	950,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	68	Petersburg and Roanoke	60	969,880	.....	.....	.....	.....	.....	....	122,871	72,898	3	.....	.....	.....
"	69	Portsmouth and Roanoke	78 1-2	1,454,171	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	70	Richmond, Fredericksb'g and Potomac	76	800,000	.....	.....	.....	.....	.....	....	185,243	85,688	6	.....	.....	.....
"	71	Richmond and Petersburg	22 1-2	700,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	72	Winchester and Potomac	32	500,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
N. C.	73	Raleigh and Gaston	84 1-2	1,360,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	74	Wilmington and Raleigh	161	1,800,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
S. C.	75	South Carolina	136	5,671,452	.....	34,410	75	201,464	77,456	....	532,871	140,196	5	.....	.....	.....
"	76	Columbia	66													
Ga.	77	Central	190	2,581,723	.....	.....	.....	227,532	93,190	....	.....	.....	....	.....	.....	.....
"	78	Georgia	147 1-2	2,650,000	.....	.....	.....	248,026	158,207	....	248,096	147,523	....	.....	.....	.....
"	79	Montgomery and West Point	89	500,000	170,000	.....	100	.....	.....	....	35,000	15,000	....	.....	.....	.....
Ky.	80	Lexington and Ohio	40	450,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
Ohio	81	Little Miami	40	400,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
"	82	Mad river	40	152,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
Ind.	83	Madison and Indianapolis	56	212,000	.....	.....	.....	.....	.....	....	.....	.....	....	.....	.....	.....
Can.	84	Champlain and St. Lawrence	15	.....	.....	.....	.....	.....	12,000	....	58,000	24,000	....	110	.....	.....

Correspondents will oblige us by sending in their communications by Monday morning at latest.

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AMERICAN RAILROAD JOURNAL.

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Thursday, July 24, 1845.

☞ For several editorial articles see page 477.

THE COAL TRADE—SCHUYLKILL VALLEY.

The shipments by railroad are 23,770 tons, and by canal 5,490 02, making 29,260 02 tons for the week.

The demand for coal continues brisk for all kinds of red and white ash coal, and the prices remain firm.

BY RAILROAD.

From Pottsville and Port Carbon—total....	157,101
From Schuylkill Haven—total....	183,695
From Port Clinton—total....	5,364
Total by railroad....	346,156

BY CANAL.

From Pottsville and Port Carbon—total.....	59-298
From Schuylkill Haven—total tons.....	16,045
From Port Clinton.....	21,590
Total by canal.....	96,934
Total by railroad and canal.....	443,090

LEHIGH COAL TRADE.

Total shipments from Mauch Chunk. Lehigh coal and navigation co.		
Summit mines, - -	82,186	
Room run do., - -	27,404	109,590
Beaver Meadow railroad and coal co.,		34,614
From Penn Haven—Hazleton coal co.,		29,256
From Rock Port—Buck Mountain coal co.,		9,284
		182,744

WYOMING COAL TRADE—total to June 28..	66,267
PINE GROVE COAL TRADE.—total.....	31,349
MINEHILL AND SCHUYLKILL HAVEN RAILROAD—total tons.....	199,401
MOUNT CARBON RAILROAD—total tons..	124,605

[Miners' Journal.

We are obliged to the friend who sent us the following notice of an article published in the Journal of the 3d July, in relation to iron bridges, as we do not receive the Anthracite Gazette in which it was published. We can well imagine a difference between a bridge for a common country, or village road, and one for such a business as that of the Reading railroad. Will "M" please give us a more definite description of the bridge referred to?

MR. EDITOR:—A correspondent of the American Railroad Journal, who signs himself "J" makes some supposed corrections on the article which appeared in you paper a few weeks ago relative to the iron bridge on the Reading railroad. "J" informs us that the railroad bridge was not the first iron bridge put up in this country, as there are now on the Erie canal two or three iron bridges of greater dimensions and of a superior kind of structure. I would inform "J" that a *railroad bridge* was alluded to, and not a *highway bridge*, such as are over the Erie canal—and as to the superior strength of the Erie canal bridges I cannot speak, as "J" has not informed us of the kind of structure, but if he asserts that the Erie canal bridges are capable of passing engines weighing 19 tons, and drawing a load of 110 cars, weighing in the aggregate 800 tons, it will be time to talk of the relative strength of the bridges. Yours, M

WASHINGTON RAILROAD.

The question of a reduction of the fare on this road was again brought before the board of directors of the Baltimore and Ohio railroad company, at the meeting of yesterday. At three several meetings heretofore, the board was equally divided on the question, but yesterday there was a majority in favor of reducing the fare to *two dollars*, and it was accordingly determined that the fare should be at that price on and after the 14th instant. This is a good step, but it does not, we think, go far enough.

The Baltimore American of 10th inst. has the above paragraph in relation to the reduction of fare on the Washington road. We have heretofore spoken freely on the subject, as our readers are fully aware, and shall have more to say hereafter in relation to it, when the present movement shall have had a fair trial. We do not, however, anticipate from so modest a movement, the full benefit which would result from a bold, liberal reduction; such as is manifestly called for by the spirit of the age, to 1·50 through, or $2 for the round trip, the same day; yet we will give it a *fair* trial, as we certainly have confidence to believe that the managers of the road act from what they deem the best interests of those who have invested their capital in the work; altho' we must still entertain and inculcate the doctrine, that "low fares and high speed for passengers" will, on most railroads in this country, tend to increase the profits of the shareholders. And we think the roads between *New York and Washington*, would especially be benefitted by such a policy, *low fares and high speed*, as thousands of our citizens would like to, and *would* visit Washington *if* the rates of travel were lower and less time were consumed.

Why should a person on going to Washington be compelled to sleep on the way? He may do so *twice* if he chooses, yet there should be *one* train a day, leaving New York at 5 P.M., by which passengers may be in Washington, certainly by 8 o'clock next morning and at a cost not exceeding $5. Then people might go to Washington, transact business and be at home again in 36 to 38 hours, and at a cost of 12 or $13. A through ticket for $5, to be divided, $2 to Philadelphia, $2 to Baltimore and $1 to Washington; with an average speed of 20 miles an hour, would add vastly to the travel over these roads, and we have no doubt that it would within a year, materially increase the income. Such a line to carry the great south mail, merely leaving and receiving mails at Philadelphia and Baltimore, would give important facilities to the business community. And such a line will *yet* be established, because the railway proprietors will find it for their *interest* to do it, Of this we have not a doubt.

We might cite the Western road from Worcester to Albany as an evidence of high fares—that is *comparatively* high—driving passengers by the way of New York, simply because they can travel 350 miles by the way of New York, cheaper than 200 miles over the railroad; but upon this subject we are not quite ready to speak.

The *Britannia*, from Liverpool, arrived at Boston on Saturday morning last, by which we received the Railway Express of the 20th, and the Railway Record of the 14th and 28th of June—but our regular files of *Herapath's Journal*, the *Railway Times*, and the *Mining Journal* have neither of them come to hand. We are fortunately, however, supplied with a file of Herapath's Journal to the latest date — by the *Great Western*, which arrived at this port on Monday morning — from a liberal friend, an eminent merchant of London, to whom we have been often before indebted for similar favors, as well as for occasional ably written communications, in relation to important subjects, in which our readers are deeply interested. For the one which we lay before them in this number from the same source, we ask the attentive perusal of all in this country who take an interest in railroads. We know well that few Americans have been more deeply interested in the success of railroads than the writer of the letter referred to—and none would derive more pleasure from their extension, and ample success, than he, and the house in a neighboring city, of which he is a member. We are fully aware of the inconvenience, and labor we have given him by our former request and desire to tender our thanks for the past; yet we cannot well avoid soliciting from him a continuance, as opportunity may allow, of his favors for the Journal, as we are sure that good will result to the cause from them.

We find, on referring to our papers, that the subject of railways continues to occupy, as heretofore, the attention, not only of speculators, but also of capitalists, both in and out of parliament—not only in England, but also in all Europe. So great, indeed, is the confidence in their value in aid of business that they are to be introduced into India on a large scale. An engineer has been recently appointed to proceed to India, with a salary of £4,000 per ann., for *five* years, and £500 for expenses out and the same in, to lay out a general system of railroads to facilitate the business of that country.

From reading the railway papers only, one is led to the conclusion that scarcely any other business than railway legislation occupies the attention of parliament. Rival lines and rival gauges give rise to a vast deal of manœuvering and eloquence, and an abundant harvest for *solicitors*. "The war of the *gauges*," as it is termed, is calling out great efforts from the friends of the original—or *narrow* gauge—to prevent the adoption of Mr. Brunel's broad—or 7 feet—gauge, as on the Great Western, while the friends of the latter are equally active—and have even been successful in the commons—to establish the broad gauge on certain important lines and their branches. It has been held by the friends of the broad gauge that there was less liability to accident upon them at high speed, than upon the narrow track; but the recent accidents upon the Great Western railroad were altogether inopportune to give force to that argument. It was exceedingly fortunate, and indeed almost a miracle, that more damage, both to life and property, was not done by the tumbling of the cars down an embankment of 10 or 12 feet, when going at the rate of 45 miles an hour; no lives, however, were lost, and

but few bones broken, or injured. We shall endeavor to give an account of the accident when we have it correctly.

(Foreign Correspondence of the American Railroad Journal.)

21 Token House Yard, }
London, July 4th, 1845. }

Dear Sir:—Excessive occupation has prevented me from replying to your esteemed favor of the 21st March, before. I have from time to time, sent you out the Railway Journal, and yesterday by the Great Western I put up six numbers by a friend, which I hope will reach you safely. I have had conversation with the editors of the railway papers here, who feel no interest whatever in American railways, neither has the public at large. There are some English interested in the Reading railroad, and in the Lehigh Navigation co, but such is their distrust of these and everything else American, owing to the delinquency of Pennsylvania and Maryland and the other defaulting states, that they will sell out as soon as they can, and have nothing more to do with our unfortunate country, whose reputation has been so wonderfully lowered in the last five years, that, although this is the anniversary of her political birth, not an American is willing to acknowledge it, by celebrating a day that ought always to be held sacred by our countrymen. This was not the case a few years ago, before our country became the bye-word of contempt and dishonor; for Americans were then proud of the land of their nativity and always celebrated the 4th of July with the utmost zeal and enthusiasm. I do not think the English will for the next twenty years feel any interest in our railways, for Holland, Belgium, France, Germany and even Italy, Spain and Portugal are much nearer and appear to engross all the spare capital that cannot find employment in the magnificent railway enterprizes of this country. We had previously to 1840 a command of the purse of England, but we have lost the confidence of this people and I fear that in neither your life time nor in mine will it be regained. Money is cheap here, 2½ per cent. for discounts, but none will go into American enterprizes. I am very sorry I cannot give you any information respecting the nature of the agreement made by the post office and the railways here. All I can say is, the system pursued by this government is liberal in the extreme, and highly remunerative compared with the niggardly system pursued by our government to the railways of the United States; whereas it ought to be precisely the reverse, for in Great Britain the railways could well do without the assistance of government, while in our country, railways are generally supported very poorly by the public, and are not remunerative to the proprietors, and therefore a paternal government ought to make great exertions to aid in all legitimate ways this incalculably valuable system for the promotion of civilization, prosperity and happiness of an immensely extended empire like ours. I am assured that our government has adopted a lower rate of postage, but it is a pitty they did not resort to an uniform low rate, say 5 cents per half ounce. In Great Britain the letters in 1844 had got up to the Great number of 242,000,000 from 75,000,000 before the penny postage was adopted.

I am glad to say that iron is decling here. I think if I had cash in hand I could execute orders for rails, such as are sent out to the United States, at £9 per ton, free on board at Cardiff; but as long as the unwise duty of $25 per ton exists in our country it is not to be expected that many railways will be made unless wood be resorted to; for our Pennsylvania iron masters have not the ability to make railway iron at anything like a price to induce purchasers to contract with them. In Pennsylvania the iron furnaces are blown out in the month of November or December, and are not relighted until February or March, whilst in this country a blast furnace is constantly at work, the fire never ceasing day or night for 12, 15, and 20 years, and I can mention furnaces in South Wales that have been in blast for twenty-five years. With the want of science, skill, capital, and experience, how is it to be expected that the iron masters of Pennsylvania and Maryland can make railway iron as fast as our railways want it. I am told the Mt. Savage iron works in Maryland is making one hundred tons per week of railroad iron, and that at the Great Western, near Pittsburg, in Pennsylvania, some railway iron is being made; but when thousands and tens of thousands of tons are required weekly, how ridiculous it is to depend on our own resources; particularly when so many thousand tons of pig and bar iron are wanted, which cannot be made in this country, but are obliged to be made and imported from Russia, Sweeden, Norway, and Great Britain. The manufacture of pigs and merchant bars require less capital, skill, and experience, and are much more remunerative than railway iron. Let the American iron master confine himself to these articles, and also boiler iron, axles, and cast iron of all kinds, and he will have full employment; and if they will allow railways to get their supplies of rails at $25 per ton cheaper, from Europe, than they now do, they will promote the construction of railways, which, in turn, will consume, for locomotives, tenders, axles, wagons, turntables, chairs, &c., &c., a *ton of iron for every ton of rails* laid down upon the road. All the iron required for railway purposes, except the rails, must be made in our country, and if you encourage the making of roads by the reduction in the price of rails, by the amount of the duty, ($25 per ton,) by so much do you encourage the consumption of American iron for railway purposes as pointed out above. But keep the railway bar at $25 per ton higher than it ought to be and you diminish the consumption of American iron by every ton that would be required to make the accessories necessary for transportation on the railway. If this is doubted, ask the Reading railway company if a pound of English iron has been used for the locomotives, tenders, wagons, turntables, axles, &c., &c. All have been made of American iron, which never would have been used, or required, if the English rails laid down on the road had not called for the use of those article, which are *exclusively* made of American iron. If this be a correct view, and I have some right to think I am correct, for I speak from thirteen years experience, is not the Pennsylvania or the Maryland iron master the very one who should make the greatest exertion to have the repeal of the duty on railway iron effected with as little delay as may be. Just in proportion as you reduce the price of iron do you increase its consumption, for it is an article of the first necessity of civilized life after food and raiment. In this country the consumption is for a most astonishing amount, and it is applied to purposes unknown in our country—indeed it is becoming the substitute for wood for almost all purposes. The increased demand for ship building and house building, independently of the increased demand for a most active and prosperous state of general trade, to say nothing of the requirements for railway purposes, is most extraordinary. You have already published in your Railway Journal the fact that one house in Walker, near New Castle, is building fifteen iron ships (for sails) for colliers, and I have to inform you that one ship building house here employs nothing but iron, and that they have on their stocks constantly seven iron steamers, and as fast as one is launched another is commenced on the ways she has just left. This house had on their books orders for 83 steamers a few months ago, how many they have now I know not, but probably many more, as the popularity of iron as a material for building vessels is constantly increasing. The number of iron vessels building by other houses in London, besides Hull, New Castle-on-Tyne, Leith, Dundee, Aberdeen, Glasgow, Liverpool, Bristol, &c., &c., would really surprise you if I had the time to collect the facts on this subject. The consumption of iron for house building, particularly for roofs, floors, joists, colums, window sills and shutters, and other parts of houses, is very rapidly increasing. The consumption for other purposes is also rapidly increasing, and I will mention only one more fact to illustrate this. I took some American friends, a short time ago, to the engineering establishment of Sir John Rennie to see nine pairs of hugh gates intended for the locks of the dock of the great government naval station of Sebastipole, in South Russia. These gates of course consisted of cast iron ribs and ties, and the filling up was of wrought (boiler) iron, and were 64 feet broad by 32 feet high, and each gate weighing nearly 100 tons, making 1800 tons of iron for these 18 gates. I should weary you if I were to continue to relate facts to show the greatly increased consumption of iron because it is cheap. It will be so in our country also if we reduce the price, and the iron masters in the United States will be more profited by selling 1000 tons at $50 per ton than by selling 500 tons at $75 per ton. Nothing stimulates consumption so much as low prices, and nothing checks it so much as high prices. I am rejoiced that there is a prospect of a railway from New England to Montreal—whether it be to connect New York, or Boston, or Portland, with the Canadian capital is not of much moment to the public, but that it should be formed with one of the American cities is of vast importance, and will, I hope, be carried out. I was sorry to see the counteracting efforts of the Canadian government to render our drawback law *inland* inoperative. But our congress did not act liberally, for the retention of 2½ per cent. of the duty on goods exported inland ought not to be. When I was in France, a few months ago, I saw bags of American cotton going from Havre across the whole breadth of France, destined for Switzerland and Germany, with nothing but a piece of lead, stamped with the custom house mark, to show they were destined for foreign countries. The duty was *nil*, and the whole expense of going through the Havre custom house was 5 centimes, or 1 American cent! whilst our custom house requires oaths, certificates, bonds, and formalities of every kind. When will governments learn wisdom and leave commerce free and unshackled from all restrictions? Oaths and quarantines are the *opprobria* of a civilized and commercial nation, and custom houses are not much better. The most prosperous nation of the world, considering circumstances, the Swiss, have no custom house whatever. I shall always be happy to serve you and be useful to you, and I will continue to send Herapath's Journal, which I exchange with him for yours, which I assure you I always read with infinite pleasure and gratification. I am, dear sir,

Yours, most truly, Gerard Ralston.

TORONTO AND LAKE HURON RAILROAD.

A single number of the British Colonist, a paper published at Toronto, Canada West, has come to hand, in which we find several articles in relation to the above named railroad. The editor of the Colonist has some very sensible remarks in relation to the routes and termini proposed by interested parties, which ought to be generally read. There is nothing more true than his remark that the "*termini* of the railroad cannot be *everywhere*," nor can the road pass every man's door, nor indeed every village, therefore we adhere to our favorite theory, of deciding the question of *route* and *termini*, all else being equal, bb the *instruments*, rather than by the personal interest of any individual. The interest and convenience of those who pay for the *use* of the work, as well as of those who receive the profits, are to be consulted *always*.

Our columns to-day contain a variety of information respecting this great undertaking We refer particularly to the proceedings of the meeting at Guelph, and the report made by the committee appointed by the meeting held lately at Detroit, in Michigan. We are desirous of keeping constantly before our readers, the best information of what is going on, in reference to this grand undertaking, with the hope that the right path will be discovered at last, and that the disputants about termini, will adopt that which must ultimately be acknowledged the best; that they will agree to travel the road when the rails are laid without quarelling! We even think that, we would ourselves be hospitably received at Goderich, notwithstanding past differences about termini, were we to go with the first pleasure party from Penetanguishene round cape Hurd; and that, even a call at Owen's sound and Saugeen, would be alike acceptable. The termini of the railroad cannot be everywhere, and the choice of the most suitable places, are fair subjects of discussion, in the public journals. We may discuss; we may differ; but there is no necessity for quarrelling. Differences are seldom reconciled by open ruptures. * *

We observe in the last Patriot, a letter signed "Locomotive," in reference to a new line of railway, which will no doubt attract considerable attention, as every line heretofore proposed has done. The plan suggested by "Locomotive," is a feasible one. It combines a variety of interests, may we not venture to say all the interests, in one common object; and, it is conceived that, if embraced at once by all concerned, there would be no difficulty in securing the necessary capital, upon a solid and fair basis, in every way favorable to the present and future credit of the province. We have said that the plan of "Locomotive" is feasible. It will be considered, probably by most of our readers, if not by the whole of them, when they trace the proposed track on the map, as an exceedingly fair and plausible one. If not adopted in all its details, we hope, at least, that it will be the means of leading to the adoption of some other plan equally fair and plausible, and combining as many great interests in its support. Union and cordial co-operation is the grand object to be attained, to further the work.

The plan of "Locomotive" is to run the line from Toronto to Guelph, Stratford, London, Chatham and Windsor.

	Miles.
Total distance	225
Branches from Stratford to Goderich	45
Hamilton to Guelph	27½ — 72½
Total length of "Locomotive" line of road	297½
We would further improve this project by embracing in it a line of railway from Hamilton to fort Erie, 53 miles, or say to Queenston, distance	41
Total length of now proposed route	338½
The distance from fort Erie to Windsor direct, by Burford, is 222 miles.	
The proposed line from Guelph to Windsor	181
Hamilton to Guelph	27½
Hamilton to Queenston	41 — 68½
Difference 27½ miles.	249½

It is obvious from those statistics, that this line of road would secure all the American travelling from east to west, and from west to east. The difference in distance, only 27¾ miles, between the proposed line and one from fort Erie to Windsor direct, is nothing in comparison with the numerous advantages which are admitted to be embodied under the proposal of "*Locomotive*."

That the proposed line would pay, if any in Canada will, we do not presume to doubt; if undertaken and speedily completed, it would prevent any adverse railway being attempted; it would open up a country proverbial for its fertility; and it would, moreover, command the favorable interest of the government; the acknowledged weighty influence of the Canada company; and the active exertions in its favor of the capitalist and patriot here and in the United Kingdom.

We submit these thoughts to the consideration of the directors to be chosen on Monday, and all others concerned.

NEW HAMPSHIRE LEGISLATURE.

It is amusing to see the 'wise men' of the old granite state strugling between their radical notions in relation to 'corporations,' and their *interest*, which would be so much promoted by their operation. The legislature, in its superior wisdom, passed a law requiring railroad companies to obtain the *consent* of each person through whose land the road would pass, before they could commence operations; a circumstance, we presume unparalleled, either in this country or elsewhere, upon a line of 50 miles in length; but they found that capitalists were unwilling to invest upon such terms, therefore they passed a law to "whip the d—l around the stump" by taking the land for the state and then *leasing* it to a company for 200 years, or so! And now they have attempted to pass a law prohibiting a man from voting upon his stock by proxy, or by his agent, but finding that it would not do to go quite so far, they have allowed a man to vote upon the proxies of *one* man to a *fiftieth* part of the capital, or to the amount, perhaps, of $50,000, yet he cannot vote on the proxies of *two* men representing two shares, or $200! *consistency* thou art a *jewel!*

Proxy Law in New Hampshire.—Notwithstanding the unfavorable indications at the commencement, we are pleased to learn that a proxy law, sufficiently liberal in its provisions for all practical purposes, was enacted at the late session of the New Hampshire legislature. To those of our citizens who are interested in railroad and manufacturing corporations in that state, the removal of this vexatious and unnecessary incumbrance upon their property must be a source of gratulation; but not more so to them than to the people of New Hampshire, that a policy, more congenial to the true interests of the state, and with more regard to the just rights of corporations, has been adopted. The leader of the radical force in the legislature, having acquired glory enough for one session, was induced to forego open opposition to this bill, which was so drawn up as to recieve the official sanction of Gov. Steele, and it may be that this modified compromise may be so guarded as to be conducive to the interests of both the state and the corporators. Hill's Patriot has the following synopsis of the bill:—

It authorizes corporations to make by-laws, providing for the representation of stock, no one person being allowed to represent more than a fiftieth part of the capital. Stockolders in corporations are authorized to appoint proxies for the representation of their property, but no such proxy is allowed to vote on the shares of more than one individual. A, for instance, can represent B's stock, whether it amounts to only one, or any number of shares not exceeding a fiftieth part of the whole number—whether B's stock amounts in value only to $100, or, as in some cases, $50,000, or perhaps $75,000. But A cannot act as proxy for B and C, at one and the same time, whether the amount of stock they own be large or small.—[*Boston Courier*]

Rutland railroad.—The stockholders in the Champlain and Connecticut river railroad, met at Rutland on the 3d, and organized by choosing six of the nine directors necessary (no stock yet taken in Boston.)—Judge Follet's name, of Burlington, is at the head of the directors as president. It was resolved to complete the subscription, if possible, to a million, before opening the books in Boston.

Passengers from Rutland, yesterday, understood that the million was actually secured. No curve less than 2000 feet—half a mile saved in distance—less than *one mile* of clay ground the whole distance—75 ascent from Rutland to Burlington. It is now with great confidence believed that 2½ millions will be amply sufficient to build the road. The meeting to take the route directly to Bellows Falls, via. Williams river.—*Keene* (*N.H*) *Sentinel.*

The commissioners of the Central railroad have advertised a meeting of the stockholders at Montpelier, on the 23d of July, for organization, by choosing 7 Directors.

The committee and persons interested in the Northern railroad (from Concord to Lebanon and the mouth of White river) have announced 'that the enterprize in which they have so long been engaged, is about to be accomplished;' and the stockholders are notified to meet at Concord, on the 8th to adopt measures for an immediate commencement of operations."—*Ib.*

THE RAILROADS OF BELGIUM,

With a notice of the other modes of internal communication—translated and abridged from "La Belgique et les Belges," by Maj. G. T. Poussin, formerly of the U. S. E.

BY G. C. SCHAEFFER, C. E.

The Belgians, famous for their agriculture, remarkably industrious, and almost as enterprizing and commercial as the Americans, have always justly estimated the importance of an easy transport of the products of the soil or of their manufactures. At a very early period great attention was paid to the improvement of the means of transport, but within a few years the extension of their system of communication has been immense—the whole country is intersected with railroads, canals, and rivers, besides numerous and excellent common roads—and Belgium in this respect is superior to France, or even England, although inferior to the United States.

COMMON ROADS.—These are divided into four classes—state roads, provincial roads, chartered roads, (routes concedes,) and country roads.

There are at present,

2,156 miles of state roads,
1,053 " provincial roads,
301 " chartered roads,

3,510 miles of paved roads.

The country roads are very numerous.

The Belgian roads are generally very well constructed, are almost all of them planted. The charge of all work pertaining to them is given to the corps of bridges and roads.

The expense of maintaining the roads absorbs the whole income of the tolls, which is entirely devoted to this purpose. The capital invested by the state has never, in the most favorable times, paid more than three-fourths of one per cent., and since the establishment of railroads, has barely paid, or even sometimes fallen short of, the expenses. The influence of the railroads in diminishing the travel on the ordinary roads has, therefore, not amounted to much, for while it has lessened the travel of the parallel, it has increased that of the transverse, lines.

Suitable provision is made for the opening of new roads, and every pains taken to maintain even the county roads in good order at all seasons.

NATURAL AND ARTIFICIAL NAVIGATION.—The situation of Belgium is remarkably favorable to communication by water, both by rivers and canals. Three great basins are comprehended within its territories—portions of the basin of the Scheldt and of the Meuse, and nearly the whole of the valley of the Yser. The tide flows throughout nearly the whole extent of them.

The basin of the Scheldt covers the greater part of the kingdom, while, of the numerous tributaries, the highest levels are not more than 100 feet above mean tide at Antwerp—a remarkably favorable condition of country for the construction of canals. The other basins, though less extensive, present the same advantages.

These remarkable natural advantages caused the Belgians, as early as the 12th and 13th centuries, to devote their attention to commerce, and the first fruits of the spirit of improvement were the ship canals of Bruges and Ghent.

Towards the end of the 15th century, the improvements of the upper Scheldt were commenced; and in the 16th century, when Antwerp became the great commercial metropolis, numerous tributaries were made navigable for the vessels from the Scheldt. It was then that Brussels, by an extraordinary effort, made itself a sea port by its famous ship canal.

The canal of Brussels runs nearly north and south, commencing in a large basin within the city and terminating in the Rupel, a branch of the Scheldt. Its length is 13 2-3 miles—its width at the surface varies from 100 to 166 feet. There are five levels. The tow path is generally from 27 to 33 feet in width, but is never less than 20 feet. The "heel path" is generally as wide.

The mean depth, with the water at the ordinary level, is 10 feet 2 inches, but vessels drawing 10 feet 9 inches go to Brussels, occasionally lightening their draught. The interior slope varies from 45 to 65 degrees. The whole descent is 48 feet, overcome by 5 locks.

This canal was commenced on the 16th of June, 1550, and was finished in 1561, long previous to any other work of the kind in Europe.

The locks of the canal of Brussels are at present 24 feet 7 inches in width, and intended to pass several vessels at the same time. It is fed by the Sonne and the waste water of the canal of Charleroy.

During the wars of Louis XIV the canals executed by Vauban were rather for military than commercial purposes.

The opening of the quarries and mines in Belgium gave a new impetus to improvement, and in the early part of the present century the Grand Northern Canal, which was to unite the Rhine, the Meuse, and the Scheldt, was commenced. The works of this period were immediately useful to Belgium, and which were completed—were the canal of Mons and the improvements at Antwerp and Ostend.

After the re-union of Belgium and Holland, the commerce of Antwerp revived, and Bruges and Ghent were reached by vessels from the ocean. Fifty millions of francs were expended upon the canals of the kingdom.

At the time of the formation of the independent kingdom of Belgium, in 1830, the Belgians felt the need of a more complete system of communication, not connected with that of Holland, upon which they had before depended, but with which they must now compete. This was the origin of the railroad system—but canals were not neglected. Many new and important works were commenced, and a fund created for this purpose, as well as for the purchase by the state of works already in existence.

The Belgians have adopted the principle that the means of communication should not be considered as sources of revenue, but that the whole income should be devoted to the maintenance and further extension of the system. Hence we find the cost of transportation on the canals reduced to 2, to 4, or, at most 5 centimes per ton per kilometre, or nearly ⅓ds of a cent to 1 cent and ½d, or, at most, 1 cent and $\frac{6}{10}$ths per ton per mile.

At present the whole length of the canals of Belgium is 439 miles. The capital invested by the state in canals and river improvements pays nearly one per cent.

All the large cities of the kingdom are united by magnificent and well kept canals. Ships reach Brussels, Antwerp, Ghent, Lakeren, Malines, (Mechlin,) and Lierre, are connected by a great canal 98 miles in total length, of great depth, and traversable by vessels from the ocean, and without locks.

Other works of great magnitude are now projected, or in progress, the estimated cost of which will be 50 millions of francs.

EASTERN RAILROAD.

The Salem Register of the 17th inst., contains the following statement in relation to the Eastern railroad for the past year. The comparative statement of the receipts and expenditures during the past five years shows an exceedingly favorable result, both in relation to receipts and expenditures. It will be seen that, with a very greatly increased business, the expenses have been reduced from $179,958 93, in 1841, to $134,318 86, in 1844! and that the receipts for the year ending June 30th *last* were $351,328 61, and the expenses were *only* $113,014 48. The cost per mile run in 1840 was .856, while in 1844 it was only .533!! Thus demonstrating, in the clearest manner, the true principle of progression of profits on well located and well *managed* railways, by a regular *increase* of receipts and *de*crease of expenses. The *net* receipts being 9.34 per cent! and that, too, at *reduced fares!*

The annual meeting of the Eastern Railroad Company was held at the Station House, in Boston, on Monday. The following gentlemen were unanimously elected as directors for the ensuing year:—Messrs. David A. Neal, John Hooper, Amos Binney, Daniel Adams, Jr., John Bryant, Jr., Isaiah Breed, John E. Thayer. Benj. T. Reed, Esq., resigned the office of treasurer, which he has held from the commencement of the enterprize; whereupon resolutions, offered by Mr. Degrand, were unanimously adopted, thanking him for his ability, zeal, industry, firmness, &c., and requesting the directors to present to him a piece of plate, with a suitable inscription.

Among the facts laid before the meeting, the Gazette says, were the following comparative statements:

Receipts.		Expenses.	
In 1840,	$193,367 57	In 1840,	$115,433 10
" 1841,	299,574 13	" 1841,	179,958 93
" 1842,	269,168 72	" 1842,	144,039 71
" 1843,	274,641 64	" 1843,	129,640 63
" 1844,	343,899 60	" 1844,	134,318 86
Miles run.		**Expense per mile.**	
In 1840,	112,047	In 1840,	.85·616
" 1841,	168,527	" 1841,	.86·085
" 1842,	184,127	" 1842,	.65·542
" 1843,	184,156	" 1843,	.56·821
" 1844,	204,963	" 1844,	.53·335

The receipts from the business of the road, during the year ending June 30th, were	$351,328 61
Expenditures,	113,014 48
Net profits from the road	$238,314 13

The net receipts being $9 34 56-100 per share.

In their report the directors say—

The result of the operations on this road during the past year will, it is hoped be satisfactory. The business has increased, and is increasing—the public are better accommodated at lessened fares—the expenses have been kept within reasonable limits; while every thing that safety required or comfort asked for has been procured—the net earnings of the road have amounted to upwards of nine per cent., independent of any income or profits from the other property of the company—a portion of that proper-

ty has nearly doubled in value—upwards of six hundred thousand passengers, without loss of life, and in all, but one instance, without personal injury, have been transported over the road—strict discipline has been observed, and good order every where maintained; and the accounts show that there is on hand, of the earnings of the road, to the credit of

Sinking fund.....	$57,390 98
Reserved fund.....	8,297 06
Balance on account.....	13,644 89
Making an actual surplus of.....	$79,232 92

It appears by the following that the Baltimore and Ohio railroad company have decided not to accept the Virginia law of last session, requiring them to terminate their road at Wheeling. We *like* this determination, not because we have anything against Wheeling, but because we are fully of the opinion that the engineer, with his *instruments*, is a much better judge where to lay a railroad than the members of *any* legislature; and that legislation should never fix the line of a railroad until the instruments have first designated its route. There can be no greater injustice done to those who furnish the capital to construct such works, than to compel them to spend it for the benefit of people who may have located themselves away from the natural channel, or line which the God of nature has designated for the work. Why tax the business community for *all time* to come, to oblige a few people in a few places? Why not select the *natural*, the *best* route, all things considered, for the business and let other things conform to it? This is our view right or wrong.

A meeting of the Stockholders of the Baltimore and Ohio railroad was held on Saturday morning last, agreably to a call from the president and directors, to take into consideration the question of accepting the law of the legislature of Virginia, authorizing the construction of the railroad through the state to the city of Wheeling, on the Ohio river. There was a very large number of stockholders present, and a decided majority of the stock was represented.

The meeting was organized by calling John Nelson, Esq., to the chair, and appointing J. J. Atkinson, secretary.

Mr T. S. Alexander appeared as the representative of the stock subscribed by the city of Wheeling but on examination it was ascertained that the subscription of that city was made conditional, and that the conditions not having been fulfilled, the subscription was vacated some time since, as provided by law. Wheeling, it was therefore decided, is not a stockholder in the company.

A communication was recieved from Mr. McLane, the president, which was read. It reviewed at length the law of the legislature of Virginia, and earnestly recommended that it should *not* be accepted.

A motion was made to postpone action on the subject at this time, but the motion was lost by a large majority.

Mr. J. P. Kennedy then offered a preamble, setting forth at length *why* the law should *not* be accepted, and concluding by a resolution "respectfully declining to accept the law of Virginia," which was unanimously adopted. The meeting then adjourned.

New route to the West.—The route from lake Ontario to lake Huron, to which we referred a few days since, was opened last week on Monday. The opening of the route is announced and advertised in the Toronto papers. Passengers can now leave Toronto at six o'clock in the morning, *reach lake Huron the same evening*, and embark in the steamer Goderich, (late Gore) from Sturgeon Bay to Detroit. Passengers can now go from Toronto to lake Huron in about 12 hours without the aid of a railroad. This is certainly a powerful fact in favor of the project of turning the great stream of western travel across the Canadian peninsula via. Toronto. Passengers leaving Oswego by the morning boats up the lake may reach the steamer on lake Huron by way of Toronto and lake Simco, in two days without the loss of an hours ordinary rest. Passengers can now go quicker to Detroit and Chicago by this route than any other, and the completion of the Oswego and Syracuse railroad, would turn a great portion of the western travel this way. The whole distance from Oswego to Detroit is performed by steamboats, except 28 miles from Toronto to lake Simco, and 19 mtles from the head of that lake to Sturgeon Bay, by post coaches upon plank roads.

The construction of the Canadian railroad from Toronto to lake Huron or the Detroit river, now rendered certain, by the fact that the stock of the road has been taken in London, must inevitably bring the whole travel of Michigan, Illinois and Wisconsin, upon lake Ontario. A look at the map of the lakes and the adjacent and intermediate country will satisfy any one of the truth of this statement. Under this aspect of the case, we predict the stock of the Oswego and Syracuse road, will not go a begging long, after the books are opened.—[*Oswego Whig.*]

TROY AND SCHENECTADY RAILROAD.

We consider this one of the best constructed railroads in the country. It has deep cuttings in places, and heavy grades to surmount in ascending from the level of the Hudson, at Troy, to the flats of the Mohawk above the Cohoes falls; yet, such is the solidity and evenness of the road, the distance, 20½ miles, is run regularly in less than an hour, and oftentimes in 45 minutes. This road, together with the Troy and Greenbush, connects the line from Boston to the Hudson river with the Utica and Schenectady road, and thus forms an unbroken chain, with uniform width of track, from Portland in Maine, to Buffalo New York, a distance of 640 miles. This road is laid with the heavy H rail, and cost a little over $31,000 per mile. They carried last year 66,086 passengers. Their receipts were $32,862 59, and their expenses for *running* and *repairs* for the same period were $26,280 81—yet we find it put down in the tabular statement of the secretary of state at $33,560 81—an error of $7,280—the cost of a new engine and cars, which were properly included in the cost of construction and out-fit, and should not have been *also*, as they have been by the secretary, included in current expenses of running and repairs.

The engines are of the best kind for passenger traffic, and the cars, made by Gilbert & Eaton, of Troy, such as a weary man delights to find.

ACKNOWLEDGEMENTS

We acknowledge the receipt of, and desire to return our thanks for, the following favors, viz:

Oswego and Syracuse Railroad.—The *Circular* of the commissioners of the Oswego and Syracuse railroad, setting forth the feasibility of the route; the kind and amount of business which it will command; its comparative advantages, with other routes, for the great *northwestern* travel, etc., etc. We were, however, in advance of the friend who sent it, as we cut it from a newspaper and had it in type, with our comments upon it, before the circular came to hand, and had given directions that a copy of the Journal containing it be sent to each of the commissioners, who, we are sure, will better understand the value of railroads after having perused it carefully for one year—or, *even* for one week—and we are equally well convinced that each will, or *should*, direct it to be sent to his address, and the *amount of subscription to ours*, by return mail.

Wear of Railroad Iron.—The communication of J. on the *wear of railroad iron*, is also received, but at too late a period for this number. It will appear in our next.

EASTERN RAILROAD REPORT.

We have received duplicate copies of the annual report of the directors to the stockholders of the Eastern Railroad Company, and we desire to return thanks in duplicate for the favor. We were upon the lookout for a report of the doings of this exceedingly well managed company, and found a synopsis of their proceedings in the Salem Register of the 17th inst., which we had in type when the report came to hand. We shall, however, refer again to the subject in a subsequent number.

UNION OF RAILROADS.

We understand that a union has been formed between the Springfield and Northampton and the Northampton and Greenfield railroads. This looks like a determination to keep down expenses—and it will, if carried out, be a convenience to travellers, and at the same time promote the interest of the shareholders.

PORT CARBON.

The town of port Carbon is situated on the Schuylkill river, about two miles from Pottsville, and is the seat of a considerable coal trade. The completion of the Port Carbon and Mount Carbon railroad, has opened a more rapid communication between Port Carbon and the Atlantic cities, than was furnished by the Schuylkill Navigation, and is proving of immense importance to the former town. This road was constructed under the energetic direction of *F. Hewson*, Esq., in a style of superior solidity and permanency; it is about 2½ miles in length, and taps the Scuylkill Valley and the Mill Creek roads at Port Carbon and connects with the Reading railroad at Mount Carbon. The first train of loaded cars, passed over it on the 30th of last November. Its tonnage is already heavy, and is rapidly increasing, and will continue to increase, as the different collieries around and beyond Port Carbon, and on the line of the Schuylkill Valley and the Mill Creek roads, are brought into connection with it.

The new track on the Mill Creek road from its termination, to its junction with the Port Carbon road, at Port Carbon, has been completed about one month; the transportation of coal over it from the collieries along the Mill creek, has been from its opening heavy, and the large weekly increase, is proving the great capacity of that portion of the coal district.

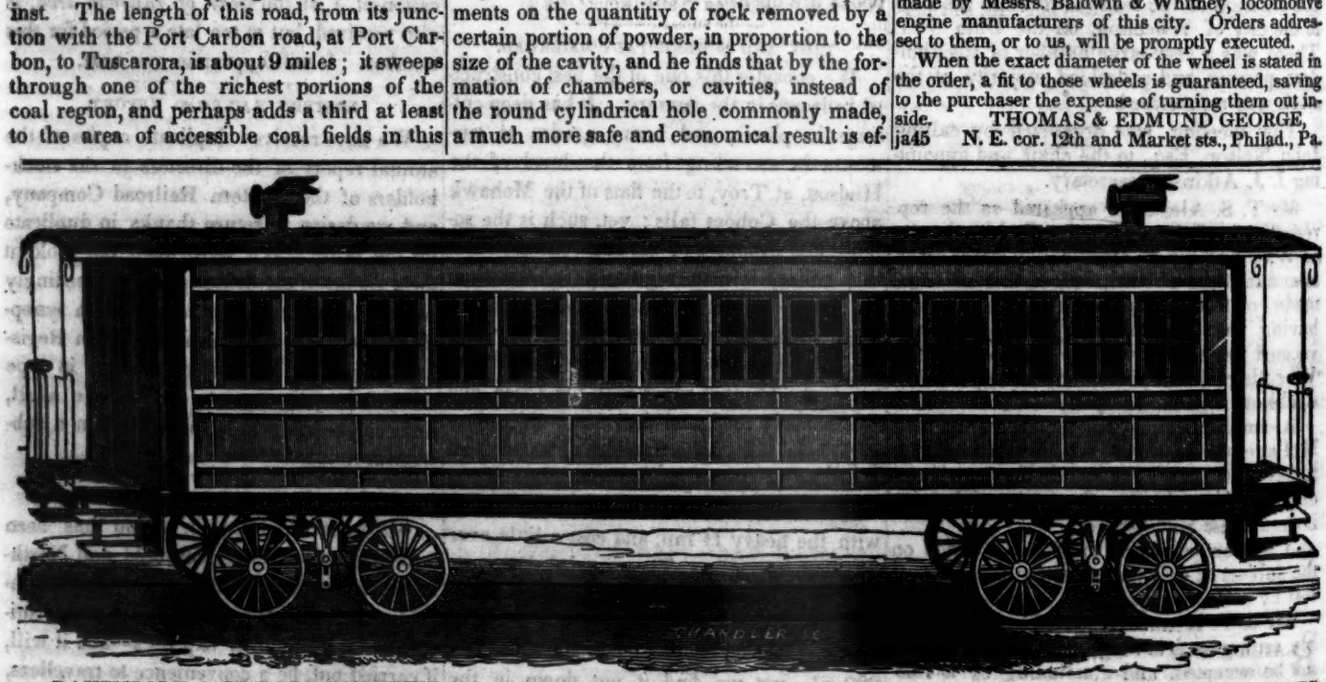
The bridge of the Mill Creek road across the Schuylkill, is a beautiful and substantial structure. It is a *Burr* bridge, with a single span of 120 feet.

The Schuylkill Valley road was completed to its termination, under the direction of *A. W. Craven*, Esq., engineer, on the 10th inst. The length of this road, from its junction with the Port Carbon road, at Port Carbon, to Tuscarora, is about 9 miles; it sweeps through one of the richest portions of the coal region, and perhaps adds a third at least to the area of accessible coal fields in this district. The length of the old road which was entirely worn out, was 10¼ miles, but the numerous and troublesome curves of the old road are avoided in the new. The grade is more perfect, and the effective capacity of the road greater. The whole of the immense tonnage of coal which passes over this road, as well as that which passes over the Mill Creek road, is sent from Port Carbon to Philadelphia and the eastern markets, either by the Reading railroad or the Schuylkill navigation. The numerous landings on the line of the Navigation at Port Carbon, are ample for a heavy trade, while the Reading railroad offers facilities for rapid transportation to those operators who prefer this more expeditious channel; so that the coal operators who ship from Port Carbon, can suit their own convenience or preference in the use of either of these two avenues. By the construction of the Port Carbon and Mount Carbon railroad, and the Schuylkill Valley and Mill Creek railroads, which are tapped by it at Port Carbon, the immense coal fields lying in that portion of the coal region are brought practically nearer to market, and it will readily be seen that this must have a salutary effect upon the prosperity and growth of Port Carbon; it will give additional impetus to the coal trade, and while that thrives a favorable impulse is felt by every other employment, and especially by the industrial and mechanical interests; and when the enlargement of the Scuylkill Navigation shall be completed, it will necessarily give a still more decided and rapid motion to improvement.—*Miners' Journal.*

New Method of Blasting Rocks with Gunpowder.—The expense attending the common mode of blasting in mines and quarries, induced M. Courbebaisse to commence experiments on the quantitiy of rock removed by a certain portion of powder, in proportion to the size of the cavity, and he finds that by the formation of chambers, or cavities, instead of the round cylindrical hole commonly made, a much more safe and economical result is effected. The experiments were made on a hard calcareous rock, in which having made a circular hole after the usual method, hydrochloric acid and water was poured in, through a copper funnel three yards long, three several times at proper intervals, as the decomposition of the rock proceeded; it was generally allowed to remain two hours, when a sufficient sized cavity was formed at the bottom of the hole to recieve a large charge of powder; the remaining liquid was removed by introducing small pistons into the hole five inches long, with valves opening upwards, and acting similarly to pump valves; tow was afterwards introduced and turned about to dry the rock, and then drawn out; powder is poured in untill the chamber is two-thirds full; upon this one of Bickford's fuses is placed; it is then filled up with powder, and the hole tamped with sand, when it is ready for firing. The explosion takes place without either flash or detonation, a dead rumbling only is heard from the cracking rock, the whole mass is seen to tremble, then rise a little, and again to fall, cracked in every direction. The rock being detached in larger masses by these means, are not thrown to a distance, but merely removed, and the gasses expanding to their full extent before they escape into the atmosphere do not detonate. By these means the operation only costs 5*d.* per yard cube, while, by the old method, the expense is from 2*s.* 3*d.* to 3*s.* 6*d.*—

TO RAILROAD COMPANIES AND MANufacturers of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside. THOMAS & EDMUND GEORGE,
ja45 N. E. cor. 12th and Market sts., Philad., Pa.



DAVENPORT & BRIDGES CONTINUE TO MANUFACTURE TO ORDER, AT THEIR WORKS, IN CAMBRIDGEPORT, MASS. Passenger and Freight Cars of every description, and of the most improved pattern. They lso furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All order punctually execued and forwarded to any part of the country
Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes.

GEORGE VAIL & CO., SPEEDWELL IRON Works, Morristown, Morris Co., N. J.—Manufacturers of Railroad Machinery; Wrought Iron Tires, made from the best iron, either hammered or rolled, from 1¼ in. to 2½ in thick.—bored and turned outside if required. Railroad Companies wishing to order, will please give the exact inside diameter, or circumference, to which they wish the Tires made, and they may rely upon being served according to order, and also punctually, as a large quantity of the straight bar is kept constantly on hand.—Crank Axles, made from the best refined iron; Straight Axles, for Outside Connection Engines; Wro't. Iron Engine and Truck Frames; Railroad Jack Screws; Railroad Pumping and Sawing Machines, to be driven by the Locomotive; Stationary Steam Engines; Wro't. Iron work for Steamboats, and Shafting of any size; Grist Mill, Saw Mill and Paper Mill Machinery; Mill Gearing and Mill Wright work of all kinds; Steam Saw Mills of simple and economical construction, and very effective Iron and Brass Castings of all descripions.t

ja451y

NICOLL'S PATENT SAFETY SWITCH for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee. G. A. NICOLLS,

ja45 *Reading, Pa.*

MACHINE WORKS OF ROGERS, KETCHum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works beingexten sive and the number of hands employed beinglarge, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,

a45 Paterson, N. J., or 60 Wall street, N. York.

FOR SALE, AT A SACRIFICE—A LOCOmotive Engine, 4 wheels and Tender. Cylinders 10 in. dia., Stroke 16 in., Cylinders inside of smoke box. Weight of engine, with wood and water, about 9 tons. This engine and tender are new, and of the best materials and workmanship. If required, would be altered to a 6 wheeled engine.

Also, 1 20-horse High Pressure Steam Engine.
2 8-horse " " "
1 Upright Hydraulic Press.

All of which will be sold low, on application to

T. W. & R. C. SMITH.
Founders and Machinists,

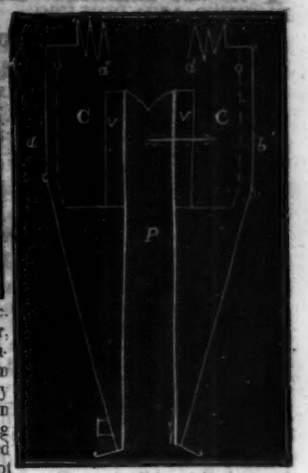
May 12tf Alexandria, D. C.

RAILROAD IRON AND FIXTURES. THE Subscribers are ready to execute orders for the above, or to contract therefor, at a fixed price, delivered in the United States.

DAVIS, BROOKS & CO.,

ja45 21 Broad st., N. York.

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.



TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

E. A. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendant Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendant Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, or to Messrs. Baldwin & Whitney, of this city, will be promptly executed. FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

Philadelphia, Pa., April 6, 1844.

*** The letters in the figures refer to the article given in the *Journal* of June, 1844. ja45

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York, will be punctually attended to.

HENRY BURDEN, *Agent.*

Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

*** Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufcturing so as to keep pace with the daily increasing demand.

ja45

SAMUEL NOTT, CIVIL ENGINEER, SURveyor and General Agent, Bangor, Me. Railroads, Common Roads, Canal, Factory and Mill Sites Towns, Farms, Wild Land, etc., surveyed. Plans and Estimates for Buildings, Bridges, etc., prepared, and all appertaining business executed.

— REFERENCES. —

Boston, { Col. James F. Baldwin, Civil Engineer. Col. J. M. Fessenden, " "

Wm. Parker, Esq., Engineer and Superintendent Boston and Worcester railroad. ja45

SPRING STEEL FOR LOCOMOTIVES, Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1¼ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, *Agent,*

j5a3 Albany Iron and Nail Works, Troy, N. Y.

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, *Agent.*

Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Ewing, Philadelphia; Wm. E. Coffin & Co., Boston.

ja45

TO IRON MANUFACTURERS. THE SUBscribers, as Agents of Mr. George Crane, of Wales, having obtained a patent in the United States for his process of smelting Iron Ore with Anthracite coal, and holding an assignment of the patent obtained by the late Rev. F. W. Geissenhainer, are prepared to grant licenses for the manufacture of Iron according to Mr. Crane's principle.

A. & G. RALSTON & CO.,

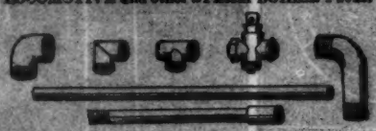
ja45 No. 4 Sout Fronth st., Philadelphia, Pa.

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to ¼ in calibre and 2 to 13 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER Flues.



Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

RAILROAD IRON.—THE MARYLAND AND NEW YORK IRON AND Coal Company are now prepared to make contracts for Rails of all kinds. Address the Subscriber, at Jennon's Run, Alleghany County, Maryland.
WILLIAM YOUNG,
jy451m President.

TO IRON MASTERS.—FOR SALE.—MILL SITES in the immediate neighborhood of *Bituminous Coal* and *Iron Ore*, of the first quality, at Ralston, Lyoming Co., Pa. This is the nearest point to tide water where such coal and ore are found together, and the communication is complete with Philadelphia and Baltimore by canals and railways. The interest on the cost of water power and lot is all that will be required for many years; the coal will not cost more than $1 to $1 25 at the mill sites, without any trouble on the part of the manufacturer; rich iron ore may be laid down still more cheaply at the works; and, taken together, these sites offer remarkable advantages to practical manufacturers with small capital. For pamphlets, descriptive of the property, and further information, apply to Archibald McIntyre, Albany, to Archibald Robertson, Philadelphia, or to the undersigned, at No. 23 Chambers street, New York, where may be seen specimens of the coal and ore.
W. R. CASEY, *Civil Engineer*,

VALUABLE PROPERTY ON THE MILL Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 feet, with lathes, work benches, &c.

Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45½ feet two stories high, with a shed part 45½x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x25 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to HENRY ANDREWS, 48 State st., or to CURTIS, LEAVENS & CO., 106 State st., Boston, or to A. & G. RALSTON & Co., Philadelphia. ja45

CYRUS ALGER & CO., South Boston Iron Company.

RAILROAD IRON AND LOCOMOTIVE Tyres imported to order and constantly on hand by
A. & G. RALSTON
Mar. 20tf 4 South Front St., Philadelphia.

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

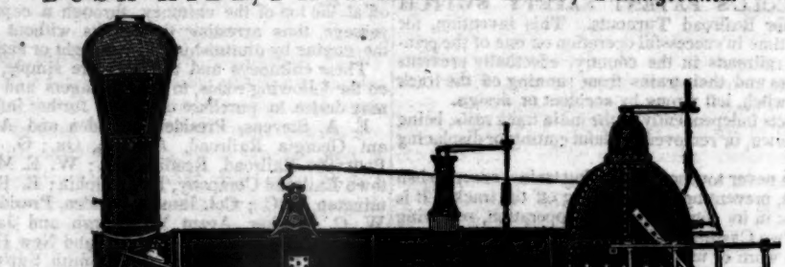
The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention. ANDREW C. GRAY,
a45 President of the Newcastle Manuf. Co.

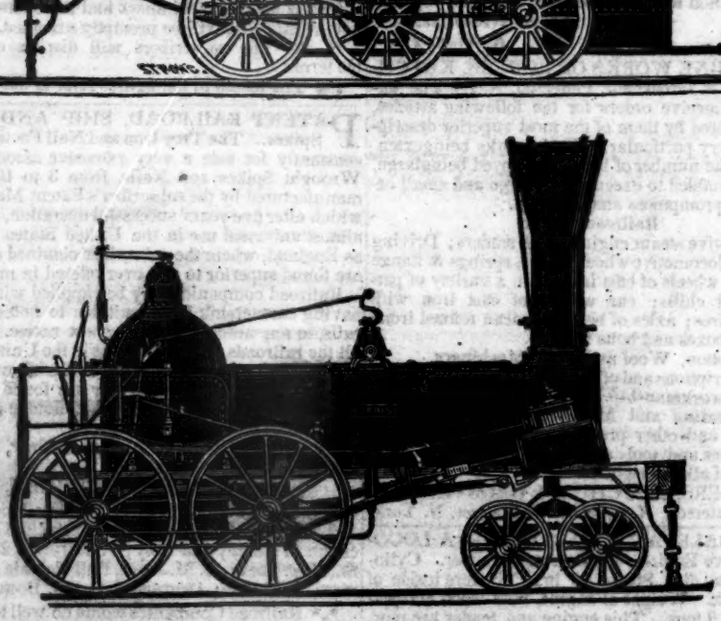
CUSHMAN'S COMPOUND IRON RAILS. etc. The Subscriber having made important improvements in the construction of rails, mode of guarding against accidents from insecure joints, etc.—respectfully offers to dispose of Company, State Rights, etc., under the privileges of *letters patent*, to Railroad Companies, Iron Founders, and others interested in the works to which the same relate. Companies reconstructing their tracks now have an opportunity of *improving* their roads on terms very advantageous to the varied interests connected with their construction and operation; roads having in use flat bar rails are particularly interested, as such are permanently available by the plan.
W. Mc. C. CUSHMAN, *Civil Engineer*,
Albany, N. Y.

Mr. C. also announces that Railroads, and other works pertaining to the profession, may be constructed under his advice or personal supervision. Applicaitons must be post paid.

NORRIS' LOCOMOTIVE WORKS

BUSH HILL, PHILADELPHIA, Pennsylvania.





MANUFACTURE their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class	1,	15	inches	Diameter of	Cylinder,	× 20	inches	Stroke.
"	2,	14	"	"	"	× 24	"	"
"	3,	14½	"	"	"	× 20	"	"
"	4,	12½	"	"	"	× 20	"	"
"	5,	11½	"	"	"	× 20	"	"
"	6,	10½	"	"	"	× 18	"	"

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion.

Castings of all kinds made to order: and they call attention to their Chilled Wheels for the Trucks of Locomotives, Tenders and Cars.

NORRIS, BROTHERS.